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## **The U.S. Federal Financial Regulatory System: Restructuring Federal Bank Regulation** *(page 1)*

*by Rose Marie Kushmeider*

Most observers of the U.S. financial regulatory system would agree that if it did not exist, no one would invent it. Most, however, would also admit that the system—despite all its faults—has served both the financial services industry and consumers well. This paper looks at arguments for and against reform in the context of changes taking place within the industry and around the world in other financial regulatory systems.

## **Consolidation in the U.S. Banking Industry: Is the “Long, Strange Trip” About to End?** *(page 31)*

*by Kenneth D. Jones and Tim Critchfield*

Consolidation has been an enduring trend in the U.S. banking industry for more than two decades. This article provides an overview of the structural changes that have occurred and explores the empirical research to determine how consolidation has affected such things as asset concentration, competition, banking efficiency and profitability, shareholder value, and the availability and pricing of banking services. Finally, the authors speculate on how the current forces of change might affect the industry's structure going forward.

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# The U.S. Federal Financial Regulatory System: Restructuring Federal Bank Regulation

by Rose Marie Kushmeider\*

## Introduction

Questions of whether and, if so, how the U.S. financial regulatory system—and particularly the federal bank regulatory system—should be restructured are hardly new. The debate over federal bank regulatory structure and organization goes back for nearly a century. Although studies, commissions and committees of banking scholars, high-level government officials and industry practitioners have been common, change has come only sporadically.<sup>1</sup> For the most part, the U.S. financial regulatory system remains a highly decentralized system that has muddled along more or less in its present form since the New Deal reforms of the 1930s.

Most observers of the U.S. financial regulatory system would agree that if it did not already exist, no one would invent it.<sup>2</sup> The overlap in tasks among federal regulators and between federal and state regulators, particularly for banks, creates a confusing system that no one building a system anew would want to duplicate. That said, most observers would also admit that for all its faults, the system seems to have served both the industry and the industry's customers well—assuring a safe and sound financial system—though the ineffi-

ciencies inherent in such a patchwork system undoubtedly impose costs. For the most part, entities within the financial services industry have learned how to operate and even thrive under the regulatory system that has developed. U.S. consumers enjoy an immense array of financial products and services, and the capital markets provide funding for businesses large and small.

Nevertheless, there is value in taking a fresh look at the structure and organization of the U.S. financial regulatory system and providing some thoughtful review as to how it could function more efficiently and effectively. Past studies have generally confined themselves to reviewing the bank regulatory system, although many have also included the regulation of savings and loans (S&Ls) and credit unions. Although the present study focuses primarily on the federal bank regulatory agencies, it addresses other areas of the federal financial regulatory structure when appropriate.

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<sup>1</sup> For a brief overview of past regulatory restructuring proposals, see the appendix.

<sup>2</sup> See, for example, FDIC (2003a) and Spong (2000), 15.

At least part of the reason for the past focus on reform of the bank regulatory structure is that until recently, dividing financial services regulation along industry lines was relatively easy to do. In addition, banking was the segment of the industry with the greatest number of federal regulatory agencies. The financial services industry, however, has continued to evolve and become more complex. Products and services once provided by distinct industries have become increasingly similar (a process referred to as product and service convergence). In fact, the convergence that began in the 1970s has not only continued but also accelerated as securitization and the development of derivatives markets have added to the blurring of the once-clear lines among banks, thrifts, securities firms and insurance companies.

This paper will discuss the creation and evolution of the U.S. financial regulatory system and compare its structure to that which other countries are now adopting for the regulation of their financial services industries. It will then look at past regulatory restructuring proposals and the arguments for and against reform. Major issues in designing a regulatory structure will be discussed and finally some options and a model for financial restructuring will be proposed.

### The Structure, Creation, and Evolution of the U.S. Financial Regulatory System

The current system for regulating and supervising financial institutions is complex.<sup>3</sup> At the federal level, commercial banking organizations are regulated and supervised by three agencies—the Office of the Comptroller of the Currency (OCC), the Federal Reserve System (Federal Reserve), and the Federal Deposit Insurance Corporation (FDIC). Thrifts are regulated and supervised by the Office of Thrift Supervision (OTS) and credit unions by the National Credit Union Administration (NCUA). The federal regulatory system also includes regulation of the securities industry by the Securities and Exchange Commission (SEC) and the Commodities Futures Trading Commission (CFTC),<sup>4</sup> regulation of Fannie Mae

and Freddie Mac by the Office of Federal Housing Enterprise Oversight (OFHEO), regulation of the Federal Home Loan Banks (FHLBs) by the Federal Housing Finance Board, regulation of the farm credit system by the Farm Credit Administration, and regulation of pension funds by the Employee Benefits Security Administration in the Department of Labor and by the Pension Benefit Guaranty Corporation. The Departments of the Treasury (Treasury), Justice (DOJ), and Housing and Urban Development (HUD) and the Federal Trade Commission (FTC) play ancillary roles. Noticeably absent at the federal level is regulation of the insurance industry, which is performed exclusively by the states. In addition, each of the states regulates financial services providers which are chartered or licensed in their jurisdictions.

The federal financial regulatory system—and specifically the dual banking system, that is, the system of federal as well as state chartering and supervision of commercial banks—did not emerge until 1863, when Congress passed the National Currency Act, creating the OCC to establish a system of national banks.<sup>5</sup> Until that time, the states had regulated the entities in the financial system.<sup>6</sup> The second major step in developing a federal financial regulatory system was passage of

<sup>3</sup> Regulation consists of the laws, agency regulations, policy guidelines and supervisory interpretations under which financial firms operate. Supervision refers to the monitoring of the condition of financial institutions and to the enforcement of regulations. The bank supervisory system, for example, includes: on-site examinations and off-site monitoring of banks and bank holding companies, enforcement of banking laws and regulations, and the resolution of problem and failed banks.

<sup>4</sup> The SEC and CFTC oversee numerous self-regulatory organizations—including the organized exchanges, the National Association of Securities Dealers, and the National Futures Association—that provide supervision and much of the regulation for the securities industry.

<sup>5</sup> Technically, the federal government entered into bank regulation in 1791, when it chartered the First Bank of the United States. The bank not only operated as a commercial bank, but also assumed some of the functions of a central bank, such as acting as a fiscal agent for the Treasury. In 1811, however, the bank was not rechartered. In 1816, the federal government chartered the Second Bank of the United States, which also failed to survive. Its charter was not renewed in 1836. Not until 1863, when political pressure for a uniform national currency mounted, was a permanent federal role established in the banking industry. The National Currency Act was extensively rewritten and strengthened in the National Bank Act of 1864.

<sup>6</sup> The earliest banks received their charters through special acts of their state legislatures and the states played a limited role in their supervision. With the development of “free banking” in the 1830s, which allowed anyone meeting certain standards and requirements to secure a bank charter, states began supervising bank operations.

the Federal Reserve Act of 1913, which created the Federal Reserve System. After that, not until the Great Depression—the turmoil of 1929 and the early 1930s—was there a major impetus for federal regulation of the financial system.

In 1932, Congress passed the Federal Home Loan Bank Act, which established the Federal Home Loan Bank System. The following year was particularly active witnessing passage of the Securities Act of 1933, the Home Owners' Loan Act, and the Banking Act of 1933. The Securities Act addressed the need for disclosure regarding debt and equity securities sold in interstate commerce or through the mail. The Home Owners' Loan Act established the federal chartering of S&Ls; it also gave the Federal Home Loan Bank Board (FHLBB) responsibility for regulating, examining and supervising S&Ls. The Banking Act of 1933, among other things, created the FDIC, which was given not only the role of providing a federal system of deposit insurance, but also the role of regulator of insured state banks that were not Federal Reserve members.<sup>7</sup>

In 1934 Congress passed the Securities Exchange Act, the Federal Credit Union Act and the National Housing Act. The Securities Exchange Act extended the disclosure principles of the Securities Act of 1933 to debt and equity securities already outstanding if listed on national exchanges, and created the SEC. The Federal Credit Union Act provided for the establishment of federal credit unions. The National Housing Act created the Federal Savings and Loan Insurance Corporation (FSLIC) and provided for the chartering of national mortgage associations as entities within the federal government.<sup>8</sup> In 1935 Congress passed the Banking Act of 1935, which among other provisions, expanded the FDIC's supervisory powers.

Thus, much of the present federal regulatory system was created in the 1930s. Since then the system has been changed and expanded piecemeal. In 1940, the Investment Company Act and the Investment Adviser Act brought investment companies and investment advisers under SEC regulation. In 1956, the Bank Holding Company

Act brought multibank holding companies under Federal Reserve regulation. In 1970, the Bank Holding Company Act Amendments brought one-bank holding companies under Federal Reserve regulation.<sup>9</sup>

In 1966, the Bank Merger Act divided the authority to approve bank mergers among the banking agencies and DOJ, making the banking industry the only industry to have its merger activity independently reviewed outside the DOJ or the FTC. In 1967 the Savings and Loan Holding Company Act Amendments provided for the regulation of savings and loan holding companies by the FSLIC. In 1970 the Federal Credit Union Act Amendments established the National Credit Union Administration as an independent agency to regulate federal credit unions; it also established federal credit union insurance under the National Credit Union Share Insurance Fund. Also in 1970, the Currency and Foreign Transactions Reporting Act and the Bank Secrecy Act brought the Treasury into the picture, allowing it to monitor large cash and foreign-currency transactions.

In the late 1960s concerns about consumer protection gained prominence as consumer credit and consumer credit instruments began growing rapidly. These concerns led to the passage of federal laws that expanded consumer protection to the financial services industry. In 1968 the Consumer Credit Protection Act, which included the Truth in Lending Act (TLA), gave the Federal Reserve rulemaking authority for truth-in-lending, although enforcement of TLA is the responsibility of all the federal financial regulators for depository institutions and the FTC for non-

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<sup>7</sup> The FDIC was given the authority to examine all insured banks, but to prevent regulatory duplication, it confined itself largely to regulating state non-member banks.

<sup>8</sup> The only association formed was the National Mortgage Association of Washington, which eventually became Fannie Mae. See: Frame and White (2004).

<sup>9</sup> Especially important to the issue of regulatory restructuring is how banks and their holding companies are regulated. Passage of the Bank Holding Company Act and its amendments placed oversight of bank holding companies (BHCs) with the Federal Reserve. This meant that, effectively, BHC regulation was separated from bank regulation; each was put on its own track; the result was overlap, duplication, and conflicts of purpose—if not of interest—that had not existed previously. Golembe (2000), 3.

depository lending institutions, such as mortgage and finance companies. Also passed in 1968 was the Fair Housing Act, which is administered by HUD and enforced by the federal financial regulators. In 1970 the Fair Credit Reporting Act was passed, which the FTC administers; the federal financial regulators examine depository institutions for compliance under the act.

The S&L crisis of the 1980s led to the establishment of a new federal regulatory agency for thrifts: in 1989, the Financial Institutions Reform, Recovery and Enforcement Act (FIRREA) abolished FSLIC and the FHLBB and created, in their place, the OTS to regulate and supervise thrifts.<sup>10</sup> FIRREA also established the Federal Housing Finance Board to regulate the FHLBs. Then in 1992 the Federal Housing Enterprises Financial Safety and Soundness Act created OFHEO to oversee Fannie Mae and Freddie Mac, which had previously been regulated by HUD and the FHLBB.<sup>11</sup>

The laws identified above form the legal basis of the federal financial regulatory system. The list is not exhaustive.<sup>12</sup> Various other laws govern the regulation of U.S. financial markets and institutions—such as those affecting trusts and pension plans. Although many of the newer laws have focused on consumer protection, a number of others have addressed issues of regulation and supervision related to concerns about safety and soundness. The latter group includes the International Banking Act of 1978 and the Federal Deposit Insurance Corporation Improvement Act (FDICIA) of 1991.<sup>13</sup> The Gramm-Leach-Bliley Act of 1999 (GLB) formalized the use of functional regulation for financial services conglomerates and entrusted supervision of Financial Holding Companies (FHCs) to the Federal Reserve.<sup>14</sup> The Sarbanes-Oxley Act of 2002, in addition to addressing issues of corporate governance, expanded the powers of the SEC and established the Public Company Accounting Oversight Board.

This complicated regulatory structure came about because financial regulation has been responsive

to several traditional themes in U.S. history.<sup>15</sup> Among them are a distrust of concentrations of financial power, including a concentration of regulatory power; a preference for market competition; and a belief that certain sectors of the economy should be ensured access to credit, a belief that has led to a multiplicity of niche providers of credit. The nation's complex regulatory structure was designed to deal with all of these sometimes conflicting objectives.

It is precisely because the patchwork nature of the system remains an artifact of U.S. politics that there has been no comprehensive overhaul of the federal financial regulatory system.<sup>16</sup> Despite the complexity of the system and the resulting plethora of proposals for change, concerns about concentrations of power, preservation of the dual banking system, and the role of the central bank, among other issues, dominate the debate, now as in the past. The repeated failure of proposals to reform the system suggests how sensitive the issues are for the many varied interest groups involved.<sup>17</sup>

<sup>10</sup> The insurance function for savings associations was transferred to the FDIC.

<sup>11</sup> Although Fannie Mae and Freddie Mac have one regulator and the FHLBs have another, all of them constitute the housing GSEs (government-sponsored enterprises).

<sup>12</sup> See Spong (2000) for a description of banking regulation and the laws to which banking organizations are subject.

<sup>13</sup> The International Banking Act applied federal regulation to foreign banks. FDICIA tightened the regulation and supervision of banks and thrifts in a number of ways. Besides establishing specific requirements for bank capital and examinations, it authorized the FDIC to conduct back-up examinations. It also incorporated the Foreign Bank Supervision Enhancement Act under its Title II provisions.

<sup>14</sup> A discussion of functional regulation is provided below. Briefly, functional regulation is regulation of a common activity or product by a single regulator for all types of financial institutions.

<sup>15</sup> Horvitz (1982), 44.

<sup>16</sup> As Golembe (2000) has observed, "In a country possessing immense natural resources, the development of which depended to a considerable extent on financing, banking—how it would be organized and who would control it—became major political issues. Political parties were often formed around, or came apart because of, views on banking. The result was 'free banking,' 'dual banking,' and deposit guarantee. All were products of their time, all are still alive, and all help account for the present fragmented regulatory structure." (p. 3).

<sup>17</sup> Bush Task Group (1984), 33.

## **International Trends in the Regulation of the Financial Services Industry**

Despite the lack of impetus for regulatory reform in the United States, in many other countries reform efforts have taken hold. Although many countries continue to regulate and supervise their financial institutions through multiple entities (ministries of finance, central banks, and specialized independent agencies), in nation after nation, serious study has been given to devising regulatory arrangements to deal with a new, more integrated, financial world. The trend has been to bring together in one agency financial supervision and regulation of the major types of financial institutions. In addition, many nations are moving the regulatory and supervisory functions outside the central bank.<sup>18</sup>

### ***The Rationalization of Financial Services Supervision***

Starting in the mid-1980s a number of countries examined their financial regulatory structures and concluded that changes were needed. Researchers at the World Bank recently reported that at the end of 2002, at least 46 countries had adopted a model of unified (or integrated) supervision, either by establishing a single supervisor for their entire financial sector or by centralizing in one agency the powers to supervise at least two of their main financial intermediaries.<sup>19</sup>

In general, countries that have adopted integrated supervision believe that a single supervisor is more effective than multiple supervisors in monitoring risks across financial institutions and in responding to real or potential threats that may undermine the stability of a financial system. Adoption of the new regulatory regimes has been motivated largely by concerns that the old regulatory structures—which were organized by and focused on types of institutions—were becoming increasingly, and perhaps dangerously, disconnected from the realities of the marketplace. The convergence of financial products and services means that many of the delineations among prod-

ucts, services, and types of institutions are becoming irrelevant. The new regulatory structures taking shape around the world represent efforts to keep supervision meaningful and effective in a rapidly evolving financial environment.<sup>20</sup>

Although the trend is toward integrated supervision, there is variation in the scope of regulatory and supervisory powers the consolidated agencies have been given. Of the 46 countries that have changed their supervisory structures, only 22 (beginning with Norway in 1986) have consolidated the regulation and supervision of all financial institutions into a single supervisory authority. In the remaining 24 countries the powers to supervise at least two of the main financial institutions—such as banks and securities firms or securities firms and insurance companies—have been centralized in one agency.<sup>21</sup> (See table 1.) In either case, the structure and organization of the supervisory system has been rationalized to reflect the belief that fewer supervisors can more effectively monitor and respond to risks within the financial system. The United Kingdom represents the first approach (a single supervisory authority), and Australia represents the second (multiple supervisory agencies but integrated supervision).

<sup>18</sup> De Luna Martinez and Rose (2003) report that, of the 15 systems they examined in detail, 14 have created a separate supervisory agency outside the central bank. They go on to warn, however, that not all of the newly created agencies are as powerful as they seem. Ministries of finance and central banks continue to play a key role in issuing and amending prudential regulations, authorizing licenses, and establishing important laws for the entire financial system. (p. 12).

<sup>19</sup> *Ibid.*

<sup>20</sup> “Financial innovation and globalization, driven by an interactive process of new information technology, competition and deregulation, are, unquestionably, progressively blurring the traditional boundaries between different forms of financial intermediation. So regulation based on particular categories of institutions has increasingly become overlaid by functional regulation. This has made the whole regulatory structure increasingly complex, both for the regulated firms and for the consuming public at large.” George (1998).

<sup>21</sup> De Luna Martinez and Rose (2003).

Table 1

<b>Countries That Have Adopted Integrated Supervision</b>	
Year-end 2002	
<b>Single Supervisor</b>	<b>Agency Supervising Two Types of Financial Institutions</b>
Austria	Australia
Bahrain	Belgium
Bermuda	Bolivia
Cayman Islands	Canada
Denmark	Chile
Estonia	Colombia
Germany	Dominican Republic
Gibraltar	Ecuador
Hungary	Egypt
Iceland	El Salvador
Ireland	Finland
Japan	Guatemala
Latvia	Kazakhstan
Maldives	Luxembourg
Malta	Malaysia
Nicaragua	Mauritius
Norway	Mexico
Singapore	Peru
South Korea	Slovakia
Sweden	South Africa
United Arab Emirates	Switzerland
United Kingdom	Ukraine
	Uruguay
	Venezuela

*Source:* DeLuna Martinez and Rose (2003).

## ***Integrated Supervision with a Single Regulator***

The most prominent example of the trend toward regulatory consolidation is the United Kingdom, whose government moved in 1997 to establish a single regulatory authority—the Financial Services Authority (FSA). In so doing, the U.K. government decided not only to consolidate all financial services supervision within one agency, but also to move that function outside the central bank. In terms of regulatory restructuring, this was the shot heard round the world. Created as an independent agency, the FSA is responsible for regulating and supervising all forms of financial services activity; it combines the regulatory and supervisory functions previously carried out by nine bodies.<sup>22</sup>

In describing the initial steps taken to establish the FSA its chairman, Howard Davies, focused on the development of the Complex Groups Division. This division has become the lead regulator for 40 to 50 institutions—banks and others—whose scale of operation is significant within the United Kingdom, which have a material international presence, whose products and services span a wide area and which are complex or innovative and require advanced risk-management techniques. Other institutions are supervised by other divisions within the FSA, such as the Banking Division or the Insurance Division. Thus, within the FSA there is functional regulation. This realignment of responsibilities is based on a distinction between wholesale and retail businesses and is an attempt to ensure the adequate oversight of a rapidly changing financial services industry.

## ***Integrated Supervision with Multiple Regulators***

The Australian model illustrates a supervisory system that has been consolidated, but has multiple supervisors. Like the United Kingdom, Australia has moved toward regulatory consolidation outside the central bank, but unlike the United Kingdom, Australia has drawn a sharp distinction between “prudential regulation” (safety-and-soundness regulation) on the one hand, and regulation to ensure market integrity and consumer protection, on the other hand. Australia has placed responsibility for the two in separate regulators.

Following the recommendations contained in the final report issued by the committee established by the government to make recommendations (the Wallis Committee), Australia established its

<sup>22</sup> The nine are the Supervision and Surveillance Division of the Bank of England, the Building Societies Commission, the Friendly Societies Commission, the Insurance Directorate of HM Treasury, the Investment Management Regulatory Organization, the Personal Investment Authority, the Registry of Friendly Societies, the Securities and Futures Authority, and the Securities and Investments Board.



centralized regulatory system in 1998. Responsibility for market integrity and consumer protection now lies with the Australian Securities and Investments Commission (ASIC), while prudential regulation has been vested in the Australian Prudential Regulation Authority (APRA). ASIC's jurisdiction extends across institutions and the financial system, and covers investment, insurance, and superannuation (pension) products. APRA provides prudential regulation of superannuation, insurance, and deposit-taking institutions. The Reserve Bank of Australia (the central bank), although it no longer has supervisory responsibilities for individual institutions, retains its responsibilities to protect the payments system and the broader economy from inflation and financial instability.

### A Need for Reform? Arguments and Past Proposals

Proposals for regulatory restructuring have a long history in the United States. The arguments for reform focus primarily on the issues of regulatory overlap and duplication while the arguments against focus on the notion that despite its faults, the present regulatory system works well. Virtually every study of the federal financial regulatory system has recommended some form of regulatory reform. The goal of most of the studies has been to streamline regulation within the banking industry so that there is less overlap among the federal regulators and fewer federal regulators examining the same banks and bank holding companies.

#### **Arguments for Regulatory Reform**

As mentioned above, the debate about reform is grounded in the complexity of the U.S. financial regulatory system. The complexity of the system has several undesirable consequences that reformers seek to mitigate or eliminate.

*Overlap and duplication.* The system as it has evolved entails substantial overlap and duplication in the regulation and supervision of financial

institutions, especially BHCs. It is common for BHCs and their subsidiaries to have more than one federal bank regulator and for their roles to overlap. For example, in its examination of national banks the OCC looks at a bank's interactions with its nonbank affiliates; the Federal Reserve frequently repeats part of this process when it looks at nonbank subsidiaries in connection with its inspection of bank holding companies. Further, as the permissible activities of financial conglomerates have expanded, so has the potential for overlap and duplication between bank and other financial services regulators. Under GLB, for example, the securities broker-dealer of a financial holding company (FHC) is regulated by the SEC, but the Federal Reserve is the FHC's umbrella supervisor. Another often cited area of duplication is in antitrust enforcement, which is carried out by the Federal Reserve, the DOJ, and the states.

The overlap and duplication in agency jurisdictions requires agencies to manage their shared responsibilities to try to minimize the time and money required to perform their tasks. Coordination among agencies is required for dealing with failing institutions and for developing uniformity in examinations and information collection. The difficulty in coordinating regulatory actions and procedures, however, results in inefficiencies—delaying the resolution of issues. Such delays can impose a significant burden on financial institutions, possibly raising the cost of product development or deterring it entirely.

Overlap and duplication of responsibilities can also result in conflicting rulings from the regulatory agencies that can be difficult to resolve and that can create opportunities for the same regulation or law to be applied unevenly to different institutions—potentially resulting in a less than level playing field.<sup>23</sup> The current system of regulatory specialization may create artificial advantages or disadvantages for particular types of competitors. As financial institutions and the products they offer have become more similar and

<sup>23</sup> Bentsen (1994).

increasingly compete with one another, differences in regulatory controls are much more likely to artificially influence the behavior of financial institutions and their customers. This may occur, for example, when banks, insurance companies, securities firms, or others compete in the same product arena, but are not subject to a common set of regulatory requirements or when those requirements are subject to interpretation and are, therefore, applied differently by various regulatory agencies.

The conflicting decisions that are possible when there is overlap and duplication of regulatory authority may also reflect a deliberate attempt by one regulator to benefit its constituents or gain converts by adopting a permissive regulatory policy—what has been termed a “competition in laxity.”<sup>24</sup> What some may see as a competition in laxity, however, others may see as part of a dynamic process of regulatory competition that furthers innovation in the financial services industry.

*Unclear authority and lack of accountability.* The current system also has engendered debate over who has the authority to regulate and supervise financial institutions and their products and services. In the 1980s, the Federal Reserve and the FHLBB engaged in a dispute about who was entitled to have a NOW account.<sup>25</sup> The FHLBB adopted a more liberal regulation for S&Ls than the Federal Reserve adopted for commercial banks. More recently, federal bank regulators disagreed with the SEC regarding proposed rules to exempt banks from being treated as brokers. Although the quality of the resolutions in these instances would not necessarily have been better had there been only one agency making the decision, when ultimate authority for a particular problem is not clearly identified, the regulatory system may lose some of its effectiveness and its ability to maintain safety and soundness may be impeded.<sup>26</sup>

In addition to blurring the lines of authority, the current federal financial regulatory system makes it hard for any one agency to be held accountable for its actions or lack, thereof. Such an absence

of regulatory accountability enables regulators to pass the buck but, more importantly, it may leave holes in the regulatory structure—regulatory gaps—that should not go unfilled. The complicated structure of regulation may lead to some problem or abuse not being detected, because a particular agency believes the problem lies in some other agency’s jurisdiction. Determining if there are deficiencies in laws or regulations may be difficult when those laws or regulations are administered by multiple agencies.

### ***Arguments against Regulatory Reform***

Critics of regulatory reform proposals have been effective at preventing a wholesale restructuring of the federal financial regulatory system and are likely to continue being effective. Experience suggests that the constituency for maintaining the status quo is strong.

Arguments against regulatory restructuring frequently revolve around two notions—that the present system has worked reasonably well and that a single agency will not assure uniform performance in all supervisory activities. It is hard to disagree with these notions. Despite the regulatory burden imposed by the present system, banks and other financial services providers appear quite profitable and the United States has developed the broadest and deepest financial markets in the world. In addition, there is much to be said for the notion that a single federal regulator may become too bureaucratic and unwieldy.

But the corollary argument—that multiple regulators are necessary to preserve the process of dynamic tension in bank rulemaking—seems at odds with the changes that have occurred in bank regulation and supervision. Over the past 25 years much effort has been made to bring uniformity and consistency to the federal bank regulatory process. For example, recognizing that insured

<sup>24</sup> Horvitz (1987), 129.

<sup>25</sup> *Ibid.*, 130.

<sup>26</sup> Bush Task Group (1984), 9.

depository institutions faced multiple federal regulators—with sometimes conflicting rules and regulations, Congress in 1978 passed the Financial Institutions Regulatory and Interest Rate Control Act. This act created the Federal Financial Institutions Examination Council (FFIEC) to promote consistency in the examination and supervision of financial institutions.<sup>27</sup>

Supporters of the regulatory status quo also cite as important the goal of maintaining the dual banking system. Proposals for regulatory restructuring, however, have focused on regulation at the federal level and have not challenged the right of states to charter and supervise banks. Nevertheless, those opposed to regulatory restructuring would argue that having one federal bank regulator would de facto end the dual banking system. This argument does not explain the existence of one federal regulator for thrifts or credit unions or suggest how to deal with the stresses that bank mergers and consolidation have placed on the viability of the dual banking system. In addition, legislation—such as the Depository Institutions Deregulation and Monetary Control Act of 1980, FIRREA and FDICIA—has reduced the differences in banking regulations and powers between state-chartered and national banks and has increased the regulatory authority of the federal bank regulators vis-à-vis state regulators over commercial banks.

Over the years, a number of those opposed to regulatory restructuring have argued that—despite the inefficiencies resulting from a multiplicity of regulators—the current system promotes innovative approaches to regulation. The claim is that the current system, in effect, maintains a degree of checks and balances among regulators, and probably results in more opportunities for industry innovation and change than would a monolithic regulatory structure. The Federal Reserve, in particular, has argued that, “a single regulator would be more likely to make sudden and, perhaps, dramatic changes in policy that would add uncertainties and instability to the banking system.”<sup>28</sup> Others would argue, however, that innovation is driven by the marketplace, not by the regulators.

Regulators mostly react to the events that drive the regulated institutions and are kept in check by congressional oversight, the courts, the press, and market pressures.<sup>29</sup>

### Major Issues in Designing a Regulatory Structure: Structural vs. Functional Regulation, Umbrella Supervision vs. Consolidated Regulation, and the Role of the Central Bank

Despite the changes made to the financial system by GLB, the U.S. regulatory system still largely assumes a financial marketplace with well-differentiated products and services and with financial services providers that can be categorized by function. Yet many banking, securities, and insurance products and services now overlap in purpose, effect, and appearance, and financial services providers have found numerous ways around the restrictions that attempt to confine them to particular regulatory niches. The result is that the dynamic financial marketplace is in effect creating organizations that manage their risks and market their products and services as unified entities—but are subject to the oversight of a comparatively static and complex regulatory structure that looks largely at individual pieces of larger organizations. In considering how to regulate these increasingly complex entities, choices have to be made between structural and functional regulation, umbrella supervision and consolidated regulation, and between whether and, if so, to what extent the central bank should be part of the financial supervisory system.

#### ***Structural versus Functional Regulation***

Structural or institutional regulation is characterized by having a single agency exercise all of the different types of regulatory controls applicable to

<sup>27</sup> The council is composed of the Comptroller of the Currency, one governor of the Federal Reserve, the director of the [now] OTS, and the chairmen of the FDIC and NCUA. A liaison committee comprised of five representatives from state financial regulatory agencies is also included on the council.

<sup>28</sup> See: Board of Governors of the Federal Reserve System (1994), 133.

<sup>29</sup> See, Bentsen (1994), 56.

a single financial firm. It allows a single regulator to examine a firm's operations as a whole, to evaluate risk across product lines, and to assess the adequacy of the firm's capital and operational systems that support all the business lines. In structural regulation, integrated supervisory and enforcement actions can be taken that will address problems affecting several different product lines. Structural regulation assumes that the financial firm being regulated serves a distinct market segment with limited overlap into other market segments.

Functional regulation, in contrast, is regulation of a common activity or product by a single agency under a common set of rules irrespective of the type of institution involved; it may artificially divide a firm's operations into departments by type of financial product or service being offered. Because structural regulation developed at a time when types of financial organizations (commercial banks, S&Ls, credit unions, securities firms, and insurance companies) provided products and services that were largely distinct from one another, structural regulation was more or less equivalent to functional regulation. A bank regulator supervised banking products and services while a securities regulator oversaw activities and products in the securities industry. Some overlap existed—such as in bank trust departments, where bank regulators performed the role of securities regulator—but overlap was not pervasive. Although many financial services firms still provide niche services, for many others the old market distinctions are invalid.

Structural regulation went unchallenged until the 1980s. By then, however, defining how one financial services firm differed from another was becoming more difficult. The advent of money market accounts, NOW accounts and share drafts; the growth of mortgage activity in commercial banks; the development of Section 20 companies; and the renewal of interest in the Industrial Loan Company charter, among other developments, led to the blurring of distinctions between types of organizations that had once been largely distinct. As the once well-defined lines separating finan-

cial services firms were being erased, the way in which these entities were regulated became problematic. The development of direct competition among different types of financial firms brought out the problem of having different regulators governing equivalent products and services. The regulatory inequities that resulted from this differential regulation hindered some firms' ability to compete and called into question their viability vis-à-vis their differentially regulated counterparts. Accordingly, the idea developed that financial firms should be regulated along functional lines.

The idea of applying functional regulation to the banking industry was first put forth in a 1982 Treasury proposal to expand the securities powers of commercial banking organizations.<sup>30</sup> Then-Secretary of the Treasury Donald Regan proposed that commercial banks be required to place their securities underwriting and dealing activities in a separate subsidiary, which would be subject to regulation by the SEC or National Association of Securities Dealers.<sup>31</sup> In 1984, the Bush Task Group endorsed the concept of functional regulation, stating that all institutions engaged in similar activities should be subject to the same regulations. Functional regulation as defined by the task group seeks to have each common activity or product regulated by a single agency under a common set of rules, irrespective of the type of institution involved. The idea is that functionally equivalent products and services should be regulated alike, regardless of the type of entity performing the function. GLB proscribed functional regulation for certain affiliates within an FHC.

<sup>30</sup> Fein (1995), 91.

<sup>31</sup> The policy was endorsed by SEC Chairman John Shad (1982).

### *Umbrella Supervision versus Consolidated Regulation and the Emergence of Consolidated Supervision*

In a system of complex financial institutions that manage risk across affiliates, the potential exists for regulatory issues to be overlooked under functional regulation. Because of this, GLB designated the Federal Reserve as the umbrella supervisor of FHCs. Umbrella supervision focuses on the collection of information in order to monitor and assess the risks that an FHC and its subsidiaries impose on an insured depository institution.<sup>32</sup> As umbrella supervisor, the Federal Reserve may take actions against affiliates of banks when those affiliates are deemed to pose a material risk to the bank, but the Federal Reserve may only instigate such actions in consultation with the affiliate's functional regulator. The Federal Reserve may not establish capital requirements for or impose limits on the products of functionally regulated affiliates of the bank.

Consolidated regulation, in contrast, is about prescribing actions. The term "consolidated regulation" is generally associated with the panoply of regulations and supervisory powers applied to BHCs—the authority to set BHC capital requirements; to set limits on or prohibit activities that may be conducted in nonbank units of a BHC; and to enforce regulatory and supervisory decisions. A consolidated regulator has the authority to require the divestiture of affiliates that are deemed to pose a safety-and-soundness risk to the bank.<sup>33</sup>

Over the past decade, the concept of consolidated supervision<sup>34</sup> has taken hold around the world, as recognition has grown that functional regulation treats financial institutions as disparate units rather than cohesive wholes. In 1991, the Foreign Bank Supervision Enhancement Act required consolidated supervision of all foreign banks that had operations in the United States. In 1992, the Basel Committee on Banking Supervision adopted its Minimum Standards for Consolidated Supervision, establishing the principle that a bank should be subject to a supervisory regime in which its financial statements are con-

solidated and subject to review by home country authorities. The Joint Forum (comprising the Basel Committee for Banking Supervision, the International Organization of Securities Commissioners, and the International Association of Insurance Supervisors) furthered the trend by developing principles appropriate to the supervision of entities that operate within financial groups. In 2002, the European Parliament passed a directive requiring all financial services firms doing business in the EU to be supervised on a consolidated basis by a home-country supervisor approved by the EU.<sup>35</sup>

Indeed, much of the restructuring of financial supervision around the world came about because of the view that financial conglomerates need to be regulated and supervised on a consolidated basis. In developing its principles, the Joint Forum was concerned that, although individual financial companies within a group might be subject to prudential supervision, the consolidated financial group might not be subject to appropriate oversight. This lack of appropriate oversight could lead to relationships or transactions that could pose financial risk to the regulated parts of the group. The Joint Forum's principles were developed to ensure that there were no material gaps in supervisors' understanding of interaffiliate relationships within a financial group that could cause financial instability.<sup>36</sup>

### *Supervision and the Central Bank*

In the United States the issue of the role of the central bank and the relationship between monetary policy and bank supervision has proved especially hard to resolve. Proposals to consolidate bank regulatory authority outside the central

<sup>32</sup> As Haubrich and Thomson (2005) state, "the umbrella supervisor is charged with producing a comprehensive picture of an institution as the collection of its parts, leaving regulation and examination of each holding-company subsidiary to its functional regulator."

<sup>33</sup> Carns (1995), 2.

<sup>34</sup> The worldwide concept of consolidated supervision focuses on the collection of information as a way to gauge the risk posed by a financial conglomerate.

<sup>35</sup> European Union (2002).

<sup>36</sup> Olson (2002).

bank or to significantly reduce the regulatory authority of the central bank have been vigorously opposed, particularly by those within the Federal Reserve. Representatives of the Federal Reserve have maintained that such proposals are fatally flawed because they would undermine the ability of the Federal Reserve to conduct monetary policy, to achieve its mission of ensuring financial stability, and to oversee a smoothly functioning payments system. According to their arguments, “These responsibilities are mutually reinforcing and are integrally linked to the banking system.”<sup>37</sup>

In discussing the link between monetary policy and bank regulation and supervision, representatives of the Federal Reserve argue that keeping bank supervision within the central bank allows monetary policymakers to better understand the relationship between their actions and bank behavior. In a study of the usefulness of supervisory data to macroeconomic forecasting, Peek, Rosengren and Tootell (PRT) found that confidential information obtained through bank supervision can potentially improve the accuracy of macroeconomic forecasts, a tool that is essential to the conduct of monetary policy.<sup>38</sup> They hypothesized, for example, that problems in the banking sector might serve as an early indicator of deteriorating macroeconomic conditions. In a follow-up study, PRT tested to determine which institutions could provide the greatest synergies for the conduct of monetary policy; they argued that these are the institutions the Federal Reserve should regulate. They found that state-chartered institutions provided the most useful supervisory information and they suggested that the Federal Reserve should be responsible for supervising these institutions.<sup>39</sup> A similar study by Feldman, Kim, Miller and Schmidt, however, concluded that there is no evidence to support the claim that confidential supervisory information would have improved macroeconomic forecasts in an important way.<sup>40</sup>

The existence of a link between supervisory information and better economic forecasts would not, by itself, prove that the Federal Reserve needed to

have bank supervisory powers. The Federal Reserve currently receives information about the majority of banks from the other banking regulators, both state and federal; it directly regulates and supervises only 12 percent of banks, representing 25 percent of bank assets.<sup>41</sup> PRT acknowledge that their argument relies on the assumption that information cannot be effectively transferred between agencies, an assumption championed by officials within the Federal Reserve. “Eliminating the Federal Reserve’s regulatory and supervisory function would deprive the central bank of complete information about the ways that levels of reserves, movements of monetary aggregates, and fluctuations in the federal funds rate are being affected by regulatory policy and decisions by bank management.”<sup>42</sup>

Despite their results, PRT state that Federal Reserve staff do not incorporate supervisory information into their forecasts, “possibly because the highly confidential CAMEL ratings are not provided to staff involved in the macroeconomic forecast.”<sup>43</sup> Rather, they find evidence for retaining bank supervisory powers within the Federal Reserve by noting that the governors and presidents of the regional Federal Reserve Banks are actively involved in bank supervisory issues and use this knowledge to alter the internal macroeconomic forecasts. PRT state that supervisory information is important only to the extent that the Federal Reserve understands the rating process and how it may change over time. Likewise, they conclude that the loss of bank supervisory responsibilities might reduce the Federal Reserve’s ability to understand the nuances in supervisory data and might therefore make the data less useful for purposes of monetary policy. Nevertheless, PRT warn other countries that have reduced their central bank’s oversight role that

<sup>37</sup> Syron (1994), 3. See also Board of Governors (1994), 132-147.

<sup>38</sup> Peek, Rosengren, and Tootell (1999), 21.

<sup>39</sup> Peek, Rosengren, and Tootell (2001).

<sup>40</sup> Feldman, Kim, Miller, and Schmidt (2002). They extend the PRT model to test it out-of-sample; they also extend the period of analysis.

<sup>41</sup> FDIC (2003b), 14.

<sup>42</sup> Syron (1994), 7.

<sup>43</sup> Peek, Rosengren and Tootell (1999), 30.

they should be careful to gather the information that is provided in supervisory reports.

Other arguments that have been put forth to justify the Federal Reserve's continuing role in bank supervision have focused on its responsibility as the lender of last resort and as overseer of the nation's payments system—roles that make the Federal Reserve more sensitive to systemic risk than other bank supervisors would be. These arguments have stressed the usefulness of supervision, for it provides a kind of hands-on knowledge of what is happening in the banking system that could not be gotten elsewhere, not even from examination reports written by examiners in other agencies.<sup>44</sup> In a discussion of PRT, Bernanke notes his reservations about the arguments for central bank supervisory responsibilities but states that the information transfer argument is stronger in the context of crisis management, when highly detailed and complex information must be transferred quickly.<sup>45</sup>

The most common argument for placing supervisory responsibility outside the Federal Reserve is that doing so would mitigate potential conflicts of interest between the conduct of monetary policy and supervision of banks. Such conflicts arise, for example, in economic downturns as concerns about safety and soundness cause banks to be procyclical in their lending behavior while monetary policy is trying to be countercyclical.<sup>46</sup> Moreover, this behavior is reinforced during bank examinations because the number of classified assets tends to increase in economic downturns. Regardless of whether examination standards are actually tightened during an economic downturn, the number of assets classified by examiners is likely to be procyclical. As this happens, banks are likely to adjust their lending. Thus the overall effect of the examination process may be to intensify the business cycle, an effect that would conflict with a monetary policy that was designed to be countercyclical.

It is argued that in such circumstances the Federal Reserve could apply moral suasion to bankers, urging them to increase lending during a downturn or restrict lending in an upturn. To many,

however, the idea of the Federal Reserve using its leverage as a regulator to persuade bankers to alter their lending decisions or to take other actions in line with monetary policy is troubling and demonstrates the danger of having the central bank regulate and supervise the banking system.<sup>47</sup> Although the use of moral suasion as a tool of monetary policy has always been discounted in the United States simply because of the difficulty of using it effectively with so many banks, the possibility that it could be used effectively increases as the number of banks declines and as fewer banks hold a greater percentage of the industry's assets.

To determine whether and to what extent the Federal Reserve needs to be involved in the regulation of banks, BHCs, FHCs or some other financial service provider, one must judge whether the benefits for the Federal Reserve of having first-hand information about an institution outweigh the inherent potential conflicts when the conduct of monetary policy is combined with supervision. Is it possible to get an accurate picture of the financial system from information provided by others directly responsible for regulation and supervision? Will the central bank have the tools it needs to deal with a crisis? In other parts of the world the answer has been to place supervisory responsibilities outside the central bank, but these structures are relatively new and have not yet been tested in a crisis.

<sup>44</sup> In discussing how the Federal Reserve managed to avert a banking crisis in New England in the early weeks of 1991, Syron (1994) states that the discount function has many similarities to the work of bank examiners. He explains that both of them involve the examination of loans, appraisals of collateral, and verification of secured interests. "The examiner's work was critical to our ability to respond quickly to the need for establishing sufficient collateral for discount window borrowing." (4-5). Syron also argues that other agencies have a more limited focus to their bank examinations—that is, the other agencies focus on the safety and soundness of individual institutions and the exposure of FDIC insurance funds to bank actions. The Federal Reserve, by contrast, must be aware not only of these considerations but also of ways in which problems can spill over to other participants and markets. Syron argues that examiners who focus solely on the safety and soundness of individual banks frequently do not have the training and the interaction with payments operations that are critical in identifying possible systemic problems. See also: Wall and Eisenbeis (1999).

<sup>45</sup> Bernanke (2001), 295.

<sup>46</sup> Peterson (1977), 27-8.

<sup>47</sup> As Bernanke (2001) noted, "Giving the central bank too broad a range of powers may invite abuse. . . . The potential for moral hazard is real and should be a concern for those who supervise the supervisors." (296-97).

### Developing a Model for Restructuring the Federal Financial Regulatory System

In thinking about a restructuring of the federal financial regulatory system, one should begin by considering the reasons for regulating the financial system. An overriding parameter of any restructuring proposal should be to build a system that minimizes access to the federal safety net while ensuring that the institutions that are being regulated are viable, competitive, and capable of meeting the needs of their customers. One should also consider how events, which are now playing out or which are likely to occur, may propel adjustments to the system—whether incremental or wholesale.

#### **Goals of Regulation**

Although some would argue that regulation exists because of the provision of the financial safety net—specifically, access to the discount window and deposit insurance—in fact, the evolution of the regulatory structure over the years suggests that even without a safety net, some degree of regulation, particularly to protect consumers, would exist. As the federal financial regulatory structure evolved, three goals emerged: to ensure the safety and soundness of the financial system, to foster efficiency within and competition among financial institutions, and to protect consumers.

*Ensuring safety and soundness.* The principal goal of the federal regulation of depository institutions is to ensure their safety and soundness and by so doing promote stability within the financial system. Operationally, this means that disruptions in the financial system should not have a significant effect on aggregate real economic activity. Thus, the failure of even a large financial institution should not be a concern unless the failure is allowed to propagate or become systemic.<sup>48</sup> Because the provision of deposit insurance eliminates the incentive for insured depositors to monitor and discipline their banks (that is, it creates moral hazard), someone else must assume the function of monitoring bankers and preventing them from taking excessive risks. In the United

States, this responsibility has fallen to bank regulators who fulfill this function primarily through safety-and-soundness regulation and supervision.

Ensuring a safe and sound banking system and promoting financial system stability while undertaking regulatory restructuring require balancing the need for effective regulatory oversight with the possibility that too much regulation can have the opposite effect—too much regulation can hinder an entity's ability to compete or induce it to undertake risky activities that it would otherwise not undertake. Fulfilling this goal also requires developing a system that limits the extension of the financial safety net in order to encourage market, as well as regulatory, discipline.

*Fostering efficiency and competition.* Fostering efficiency within and competition among regulated institutions so that customers are provided quality products and services at competitive prices is another goal of regulation. Efficiency and competition are closely linked. Efficiency is promoted by fostering fair and equal competition among firms. In a competitive financial system firms must operate efficiently in order to keep their customers and remain in business. Competition also spurs innovation.

To maintain a competitive system, regulators must be concerned with such issues as the prevention of excessive concentration of economic power, and the ease of entry into financial markets. Regulators must also consider the allocation of resources among financial firms, promoting competitive standards that do not differ significantly among financial institutions and that do not place some financial firms at a disadvantage relative to others—what has otherwise been termed, maintaining a level playing field. Another goal of regulatory reform, therefore, should be to foster efficiency in regulated entities and to ensure a level playing field for all competitors.

*Protecting consumers.* Protecting consumers (including consumers as investors) is the third goal of federal financial regulation and covers

<sup>48</sup> Hoenig (1996), 7.



such concerns as enforcing contracts, protecting consumers against fraud, and providing full and accurate information on the terms and conditions of obtaining credit or purchasing financial products. Much of the legislation and regulation in this area is concerned with maintaining market integrity—providing meaningful disclosure in order to afford consumers and investors a basis for comparing and making informed choices among different products and services. Equal treatment and equal access to credit are also important objectives. More recent legislation focuses on privacy concerns.

As discussed above, consumer protection regulation in the financial services industry is administered by a variety of agencies, and can result in differential regulation and the inequitable treatment of firms competing in the same market. Members of the public can suffer too, if they receive different levels of protection when they purchase similar products or services from different financial firms, or if differences in the application of laws and regulations hinder their ability to compare products and services. Here too, rethinking the regulatory system in light of the realities of the changing marketplace could lead to better consumer protection.

### ***Future Problems Will Affect the Regulatory Structure Debate***

Regardless of whether one believes that regulatory reform is likely, events and issues are sure to stimulate discussion of it in coming years. Among such issues are funding for the OCC and OTS,<sup>49</sup> disagreements between the federal and state banking regulators over rights of preemption,<sup>50</sup> questions over how financial firms should be regulated for compliance with anti-money laundering and other anti-terrorist financing regulations,<sup>51</sup> growth in the number of issues that cross the lines separating functional regulators,<sup>52</sup> the need to provide consolidated supervision for financial service firms that are interested in operating in the European market,<sup>53</sup> consideration of the expansion of the products and services offered by ILCs,<sup>54</sup> and a widening of the differences between

the largest banking organizations and the rest of the banking industry, including differences between them in risks posed.

### ***Options for Restructuring the Federal Financial Regulatory System***

The options for restructuring the federal financial regulatory system outlined below range from the least intrusive and most easily accomplished reforms—ones that regulators could undertake themselves or that require little legislative change—to a full-scale restructuring of the federal financial regulatory system. There are valid arguments for taking either approach or even for finding some middle ground, such as a thorough restructuring of only federal bank regulation rather than of the entire financial regulatory system. Within each option there is room for debate over how regulation might be structured—for example, which financial entities might be included.

<sup>49</sup> Consolidation among banks has affected the funding of both the OCC and OTS and has raised questions about how state banks are charged for their own supervision. Additionally, as the thrift industry continues to shrink, the role of the OTS becomes more problematic: legislation has taken away the advantages of operating thrifts, and a declining industry is unlikely to be able to support an independent agency.

<sup>50</sup> Both the OCC and OTS have been active in preempting certain state consumer laws affecting the institutions they regulate. See: OCC (2003).

<sup>51</sup> Recent controversies regarding the vigilance with which anti-money laundering and anti-terrorist financing laws have been enforced by bank regulators have led to questions about whether this function should be administered elsewhere. Administration of these laws is the responsibility of the Treasury and involves coordination with many agencies, both in the United States and abroad.

<sup>52</sup> As banks, securities firms and insurance companies continue to find ways to compete with one another, it will become impossible to separate banks from the larger financial services industry of which they are a part. Thus, issues will arise between regulators over how similar products and services are regulated and who has ultimate jurisdiction over them. For example, the SEC and federal banking regulators have differing views on the issue of how to apply brokerage rules to banks.

<sup>53</sup> For BHCs and FHCs and their subsidiaries operating in the EU, the Federal Reserve provides consolidated supervision; however, other financial service providers operating in the EU will be regulated by the EU if they do not have a consolidated supervisor. The SEC has issued a proposal to provide consolidated supervision for broker-dealers that meet minimum capital requirements; one of their reasons for doing so is to allow these broker-dealers to meet the EU requirements. Similarly, the OTS has designated itself the consolidated supervisor of thrift holding companies.

<sup>54</sup> Questions about the regulation of ILCs have increased as the number of commercial companies and others that are not regulated as BHCs seek to acquire this charter. For a further discussion of the issues posed by ILCs and the mixing of banking and commerce, see: Blair (2004).

### *An Incremental Approach to Regulatory Restructuring—What Can Regulators Do?*

Given the difficult political questions that would have to be resolved if the federal financial regulatory structure were to be restructured, a number of observers have recommended that any approach taken be incremental. The benefit of an incremental approach (which would involve simplification rather than consolidation) is that it would be likely to spark less debate that would stymie action and it would not limit the options for later reform. Simplification (such as eliminating redundancies in current supervisory policy) would not tread on the dual banking system, nor would it limit the central bank's authority to obtain whatever data it might need to play its desired role in the nation's financial system. Simplification promulgated by the agencies themselves would give decision makers time to evaluate and correct their actions as they went along. It might also be achievable because it would require neither legislation nor a crisis.

At a conference hosted by the FDIC a number of speakers made explicit suggestions for initiatives that the regulatory agencies could undertake themselves.<sup>55</sup> Chief among these were for the agencies to develop ways of sharing resources and various kinds of expertise. It was suggested, for example, that the Federal Reserve could take the lead in setting and enforcing risk-based capital rules, and the OCC could take the lead in defining and enforcing rules for the sale of non-deposit investment products. Under such a scheme, other regulators with jurisdiction over an institution would be required to abide by the judgment of the lead agency in the specific area. Disputes would be resolved among the agencies, each of which would have the right to review reports generated by the others. Other suggestions along this line included having the regulatory agencies contract with other regulatory agencies when in need of specialized expertise rather than building it in-house or having regulators establish cross-agency teams to supervise specialized institutions regardless of a particular institution's charter.<sup>56</sup>

Another way for agencies to streamline regulation would be to improve the rulemaking process. Disagreements and inconsistencies among the regulatory agencies make for bad policy, increased confusion, and increased costs for supervised institutions.<sup>57</sup> It has been proposed that the federal financial regulatory system move toward integrated rulemaking while maintaining separate supervisors.<sup>58</sup> Other suggestions are for the agencies to specify what regulations are outmoded and how they can be changed. The EGRPRA project currently headed by the FDIC is making progress in this area.<sup>59</sup>

Overhead is another area where regulators may be able to achieve efficiencies and reduce the cost of regulation, both for themselves and for the firms they regulate. For example, each of the federal bank regulators maintains its own headquarters and regional offices, its own administration and personnel staff, its own computer system, its own contracting offices, its own data collection and dissemination facilities, its own economic analysis and research function, and its own training facility. The FDIC has estimated that the OTS, the OCC, and the FDIC spend in total more than \$200 million annually on backroom operations to support their supervisory activities.<sup>60</sup> Sharing these functions may be one way to reduce costs, increase the sharing of information among the bank regulators, and ease the regulatory burden on the industry.

### *Comprehensive Restructuring—A Possible Model for Reform*

An approach that contrasts with the incremental option is to think about how one would develop a system of federal financial regulation if one were

<sup>55</sup> FDIC (2003a).

<sup>56</sup> Stern in FDIC (2003a).

<sup>57</sup> Lazio in FDIC (2003a).

<sup>58</sup> Bair in FDIC (2003a).

<sup>59</sup> The EGRPRA project refers to reviews the regulatory agencies must conduct every ten years under the Economic Growth and Regulatory Paperwork Reduction Act.

<sup>60</sup> Powell (2002).

starting anew. Such an attempt at comprehensive reform raises complex issues regarding dual banking (or more generally, the role of the federal and state governments in regulation); deposit insurance and the extension of the financial safety net; and the role of the Federal Reserve. Many proposals have foundered because they were unable to generate consensus on these issues. The model presented here will undoubtedly also spark controversy, but nevertheless presents a framework for comprehensive reform. The discussion is based on three assumptions: that the dual banking system will remain; that the Federal Reserve will intervene in a systemic crisis and needs the tools to do so effectively and efficiently; and that the deposit insurer needs to be able to control its risk.

The model will have to deal with three questions. The first concerns financial conglomerates, the second concerns the two-tiered nature of the banking industry, and the third concerns the relationship between consumer protection regulation and prudential (safety-and-soundness) regulation.

Banks have been subject to the most rigorous regulation and supervision in the financial services industry mainly because of their “special” nature,<sup>61</sup> but financial modernization and the movement toward financial conglomerates have lessened the special distinctions between banks and other financial service providers, and have increased the types of financial organizations that may be capable of posing a systemic risk to the financial system. Many of these large financial conglomerates do not fall under the purview of the safety-and-soundness regulation of the federal bank regulators. Accordingly, in designing a financial regulatory system, one needs to decide whether these entities should be regulated in the same manner as BHCs or whether the regulation of BHCs should change to be more like that currently applied to nonbank financial conglomerates. However the issue is resolved, regulatory restructuring should be concerned with creating a more uniform approach to all large financial conglomerates.<sup>62</sup>

The second important issue when one is modeling a regulatory system is how to deal with the fact

that financial products and services are provided by a two-tiered industry. Over the past decade the introduction of new products and services, the process of product and service convergence, and the ability of banks to expand their operations across state lines have created a bifurcated banking industry. Current regulatory practice recognizes this bifurcation and makes some adjustments for it.<sup>63</sup> In considering reform of the regulatory system, however, one must consider whether these adjustments are adequate, or whether the differences between “small” and “large” financial service providers warrant separate regulatory and supervisory treatment. As former FDIC Chairman Powell has asked, “How do we design safety-net arrangements to work most effectively in an industry consisting of a few large banks on one side and thousands of community banks on the other?”<sup>64</sup>

The last question affecting the model outlined below is whether consumer protection regulation and investor protection (termed market integrity) regulation would be more effectively and efficiently administered by those who administer safety-and-soundness regulation or by an independent entity. As the discussion above of the U.K. and Australian systems indicates, opinions differ.

The model that follows would reconfigure the current system of federal financial regulation into four independent agencies. The first (Agency A) would administer all consumer protection regulation for the financial services industry. The second and third would administer the safety-and-soundness regulation deemed necessary for federally insured depository institutions and their parent companies and affiliates. One of the two would administer the regulation for small and noncomplex institutions (Agency B); the other

<sup>61</sup> The special nature of banks has been widely discussed. It focuses particularly on the ability of banks to offer transactions services and administer the payments system, their role as providers of backup liquidity to the economy, and their role as transmitters of monetary policy. See: Corrigan (1982), 2-24. Banks also have access to the federal financial safety net.

<sup>62</sup> See, for example, Raines (2004) and McDonough (1997).

<sup>63</sup> See: Powell (2004) and Meyer (1999).

<sup>64</sup> Powell (2004).

would administer the regulation for large or complex institutions (Agency C).<sup>65</sup> The fourth agency (Agency D) would administer the federal deposit insurance programs for all insured depositories. In addition, the Federal Reserve would have authority to require information from or conduct examinations of any financial institution deemed to pose a systemic risk to the financial system regardless of its insurance status. As described later, the model also considers antitrust enforcement and state-chartered institutions.

The model is based on the size and the degree of complexity of a particular financial organization. The vast majority of financial organizations are not large and complex, and for this majority, regulation of the insured financial entity without the need for consolidated regulation or umbrella supervision of the parent company should be sufficient. For large or complex organizations, however, an additional layer of supervision (in the form of umbrella supervision of the parent company) is needed to ensure that risk is managed between entities.

The key question, therefore, is no longer which industry a financial organization fits into, but whether the institution is large or complex. In any event, for all institutions a case could be made for putting consumer and investor protection in the hands of a single regulator (that is, for functional regulation). Much of the regulation protecting consumers crosses industry lines and in these areas consumers of financial products would likely find it easier to deal with one regulator rather than with the current maze of regulators.

*Consumer protection and market integrity regulator.* The regulator for consumer protection (Agency A) would administer federal consumer-related and investor-related regulations for all financial service providers. This agency would take over the regulation and supervision of depository institutions with respect to consumer protection laws and would administer the current functions of such agencies as the SEC, the CFTC, the Employee Benefits Security Administration of the Department of Labor, and the Pension Benefit Guaranty Corporation, among others.

Over the past several years, emphasis has also been placed on obtaining strategic law-enforcement information gathered from reports supplied by a variety of financial services firms. Enforcement of the Bank Secrecy Act and other anti-money laundering and anti-terrorist financing laws, currently carried out by federal bank regulators in conjunction with the Treasury and the Department of State, among others, could also be consolidated under this regulator.

*Safety-and-soundness regulator for relatively small, noncomplex insured depository institutions.* This agency (Agency B) would be the federal safety-and-soundness regulator for relatively small, noncomplex insured depository institutions regardless of charter.<sup>66</sup> This regulator would have the authority to grant federal charters, establish capital requirements, enforce prompt corrective action, collect information necessary for the timely monitoring of the institution, and take action to ensure that firewalls were not breached.

If insured depository institutions were part of a larger organization, they should be separate affiliates within a holding company structure. Administration of consumer protection regulation for the insured depository institutions and any nonbank affiliates would be functional.<sup>67</sup> The parent holding company would be unregulated, although it would be required to provide such information as would be necessary for the regulator to determine that the firewalls were not being breached.<sup>68</sup> This information would be obtained

<sup>65</sup> Complexity refers to the scope of products and services offered by the financial entity and the degree of risk inherent in those products and services.

<sup>66</sup> The size of the institution is based on that of the insured entity or sum of entities, if there are multiple affiliated insured institutions. Although the exact definition would have to be determined, a possible definition of a relatively small, noncomplex insured depository is "an institution with less than \$5 billion in assets, with a relatively simple balance sheet (that is, an institution primarily engaged in providing traditional products and services according to its charter type), with no significant off-balance-sheet exposures, and with a minimal reliance on intangible income sources." [Daniel Nuxoll (senior economist, FDIC) in discussion with author. 2003.]

<sup>67</sup> They would be regulated by the agency in charge of consumer protection and by any appropriate state authority.

<sup>68</sup> Consolidated regulation currently exercised over BHCs would be abandoned. In 1987, an FDIC study concluded that banking companies could be allowed to offer a wider variety of products because banks could be insulated from the risks associated with nonbank affiliates without the need to spin a regulatory web around the entire organization. FDIC (1987), 101-2.

through supervision of the regulated financial entity.

*Safety-and-soundness regulator for other insured depository institutions.* This agency (Agency C) would be the federal safety-and-soundness regulator for insured depositories that are deemed large or complex or that are part of a large, complex financial conglomerate.<sup>69</sup> As above, the insured depository institutions should be separate affiliates within the holding company structure. Also, as above, the regulator would have the authority to establish capital requirements, enforce prompt corrective action, collect information necessary for the timely monitoring of the institution, and take whatever action was needed to ensure that firewalls were not breached.

In addition, this regulator would exercise umbrella supervision of the parent financial holding company and of the nonbank affiliates of the bank.<sup>70</sup> In this context, umbrella supervision refers to the ability to collect information about the parent financial company and its affiliates; and the ability to monitor, assess and act to control the risks imposed on the insured institution by other parts of the organization.<sup>71</sup> Umbrella supervision here would not extend consolidated regulation (as currently applied to BHCs) to the parent holding company or its affiliates.<sup>72</sup> The purpose of umbrella supervision would be to enhance the effectiveness of the firewalls separating the insured entity from its parent and affiliates.

This regulator would also apply safety-and-soundness regulation to nondepository financial institutions or organizations that are large or complex and that pose a contingent liability to the government. Fannie Mae, Freddie Mac, and the FHLBs would fall into this category, for example.

*Regulator for federal deposit insurance programs.*

This agency (Agency D) would be the regulator for all federal deposit insurance programs. It would administer deposit insurance and receivership functions and would maintain backup supervisory and enforcement authority over insured depository institutions.

*Role of the central bank.* Although under this model the Federal Reserve would no longer have a direct role in the supervision of depository institutions, it would maintain and even expand its role in controlling systemic risk wherever systemic risk might occur in the financial system. As noted above, in a recent speech, Franklin Raines discussed the need for having a single umbrella financial regulator that would monitor systemic-risk issues and set broad policies to control systemic risk.<sup>73</sup> Although he did not cite the Federal Reserve as this regulator, the Federal Reserve is an obvious choice because of its role in promoting financial stability and its history of intervening in crises involving systemic risk within the financial system.

To fulfill this role, the Federal Reserve would have backup authority to intervene in financial markets to ensure financial stability. It would retain a supervisory interest in financial institutions that were deemed to pose an ongoing systemic risk to the financial system regardless of whether such institutions were supervised by another federal regulator. The list of these institutions would be distinguished by their activities as well as their size. Examples would be institutions with a substantial market position in a financially critical market, such as providers of a significant portion of payments-clearing services.<sup>74</sup>

<sup>69</sup> As one would expect, any depository institution that does not fall into the category of small and noncomplex would be placed here. The criterion for determining a large or complex financial conglomerate is problematic and is beyond the scope of this paper to develop.

<sup>70</sup> For financial companies owned by a nonfinancial commercial parent, umbrella supervision would be applied to the financial entities but would not extend to the parent commercial firm. The financial entities of these companies would be placed into the appropriate regulatory category on the basis of the size and complexity of the operations of the financial entity regardless of the parent company.

<sup>71</sup> See Helfer (1997), 10: "In view of the increasing complexity of the financial marketplace, functional regulation alone may not be sufficient to ensure effective and efficient oversight of banks and other providers of financial services. . . . Some activities, practices, and intercompany dealings that affect the distribution of risk across the organization may go unnoticed if there is singular reliance on a functional approach. This suggests a need for some coordination and attention to interstitial concerns, such as maintaining accurate information regarding all operations in the organization, and monitoring compliance with the rules on intercompany dealings . . . ."

<sup>72</sup> See: Kwast (1996), 746.

<sup>73</sup> Raines (2004), 3.

<sup>74</sup> Litan, in FDIC (2003a).

*Antitrust enforcement.* Antitrust enforcement would be administered by either the DOJ or the Federal Reserve. An argument for having the Federal Reserve maintain this function is that in applying the antitrust statutes, the Federal Reserve would be able to consider the likely effects of consolidation on systemic risk. Conversely, antitrust enforcement could be placed solely within the purview of the DOJ, and the Federal Reserve could make its views known if it believed there were systemic risk implications.

*Dual banking and the role of the states.* States would maintain their role as regulator and supervisor of all state-chartered institutions. For state-chartered institutions that did not have a federal safety-and-soundness regulator, states would be the sole safety-and-soundness regulators. For state-chartered institutions that were federally regulated and supervised, states would share regulatory responsibilities with their federal counterparts.

### Conclusion

Reform of the U.S. financial regulatory system is far from assured. Matters are complicated by the dual system for regulating financial services firms. State regulators—including banking commissioners, states' attorneys general and others—compete with their federal counterparts in the regulation and supervision of financial services firms. In addition, state regulators are the sole supervisors of insurance companies, since the United States has no national charter for these firms.

The dynamic tension created by the presence not only of state regulators but also of multiple federal regulators has led many banking commentators to observe that nothing will change the regulatory structure of the financial services industry unless the politics of the current system are taken into consideration. Unlike citizens of other countries, who may not worry about concentrations of power, U.S. citizens have demonstrated a clear preference for decentralization. Further, it is commonly said that regulatory reform in the United States will be very hard to achieve with-

out a big event to propel it forward. Although some tinkering around the edges may be possible, wholesale change—which would require congressional action—is not likely in the absence of a crisis that would minimize battles over turf and unite the entrenched constituencies.

That said, a number of industry observers have speculated that product convergence, or what Schooner and Taylor have termed functional despecialization, could provide a powerful argument for regulatory consolidation in the United States.<sup>75</sup> Indeed, many of the countries opting for regulatory consolidation have cited concerns over an apparently increasing divergence between their old regulatory structure and the financial industry that the structure was responsible for regulating. The main factors hastening the divergence are financial innovation, a growing similarity between financial products, the widespread availability of new information technologies, and globalization.<sup>76</sup>

This paper has provided background and a framework for thinking about the issues involved in restructuring the federal financial regulatory system. It has reviewed past proposals and investigated ways in which other countries are restructuring their systems. Although many observers of the banking system doubt that the U.S. system will ever undergo restructuring, the financial services industry continues to evolve and, as it does so, questions continue to be raised as to whether the current regulatory system is up to the challenge. The task of legislators, regulators and others is to be sure that the regulatory system can accommodate financial change yet promote the regulatory objectives of ensuring safety and soundness, fostering efficiency and competition, and protecting consumers, all the while maintaining the stability of the financial system. Whether a restructuring of the federal financial system will eventually occur remains to be seen.

<sup>75</sup> Schooner and Taylor (2003), 317-346.

<sup>76</sup> De Luna Martinez and Rose (2003).

### REFERENCES

- Bentsen, Lloyd. 1994. Prepared Statement. *Banking Industry Regulatory Consolidation: Hearings before the U.S. Senate Committee on Banking, Housing, and Urban Affairs*. 103rd Cong., 2nd sess., March 1-9.
- Bernanke, Ben. 2001. Comment. In *Prudential Supervision: What Works and What Doesn't*, edited by Frederic Mishkin, 293-300. The University of Chicago Press.
- Blair, Christine. 2004. The Mixing of Banking and Commerce: Current Policy Issues. *FDIC Banking Review* 16, no. 4: 97-120.
- Board of Governors of the Federal Reserve System. 1994. The Views of the Board of Governors of the Federal Reserve System on the Consolidation of Bank Supervision and Regulation. *Banking Industry Regulatory Consolidation: Hearings before the U.S. Senate Committee on Banking, Housing, and Urban Affairs*. 103rd Cong., 2nd Sess., March 1-9.
- . 2000. Framework for Financial Holding Company Supervision. Supervisory Letter, SR 00-13. August 15.
- Bush Task Group. 1984. *Blueprint for Reform: The Report of the Task Group on Regulation of Financial Services*. Washington, D.C. U.S. Government Printing Office.
- Carns, Frederick S. 1995. A Two-Window System for Banking Reform. *FDIC Banking Review* 8, no. 2: 1-12.
- Commission on Money and Credit. 1963. *Report of the Committee on Financial Institutions to the President of the United States*. Washington, D.C. U.S. Government Printing Office.
- Corrigan, E.G. 1982. Are Banks Special? Federal Reserve Bank of Minneapolis *Annual Report*.
- De Luna Martinez, Jose and Thomas A. Rose. 2003. International Survey of Integrated Financial Sector Supervision. Policy Research Working Paper 3096. The World Bank.
- European Union. 2002. Directive 2002/87/EC of the European Parliament and of the Council. December 16.
- Federal Deposit Insurance Corporation (FDIC). 1987. *Mandate for Change: Restructuring the Banking Industry*. Washington, D.C. FDIC.
- . 2003a. The Future of Financial Regulation: Structural Reform or Status Quo? FDIC. Conference. Washington, D.C., March 13.
- . 2003b. *Quarterly Banking Profile*. Fourth Quarter. FDIC.
- Federal Home Loan Bank Board (FHLBB). 1983. *Agenda for Reform*. Washington, D.C., FHLBB.
- Fein, Melanie L. 1995. Functional Regulation: A Concept for Glass-Steagall Reform? *Stanford Journal of Law, Business & Finance* 2, no. 1:89-128.

## Restructuring Federal Bank Regulation

---

- Feldman, Ron, Jangryoul Kim, Preston Miller and Jason Schmidt. 2002. Are Banking Supervisory Data Useful for Macroeconomic Forecasts? Working Paper 1-02. Federal Reserve Bank of Minneapolis.
- Ferguson, Roger W., Jr. 2000. Umbrella Supervision: Emerging Approaches. Remarks before the National Association of Urban Bankers, Urban Financial Services Coalition, San Francisco, CA., May 26.
- FINE Study. 1975. *Financial Institutions and the Nation's Economy (FINE) "Discussion Principles": Hearings before the U.S. House of Representatives Subcommittee on Financial Institutions Supervision, Regulation and Insurance of the Committee on Banking, Currency and Housing.* 94th Cong. 1st & 2nd Sess. December 2-10.
- Frame, W. Scott, and Lawrence J. White. 2004. Fussing and Fuming over Fannie and Freddie: How Much Smoke, How Much Fire? Unpublished.
- George, E.A.J. 1998. The New Lady of Threadneedle Street. Speech at the Vital Topic Lecture given at the Manchester Business School, February 24.
- Golembe, Carter H. 1998. Central Banking and the English Experiment. *The Golembe Reports*, 6.
- . 1999. The U.S. Financial Regulatory Structure—Out of Step with the Rest of the World? *The Golembe Reports*, 5.
- . 2000. Reform of the Financial Regulatory Structure. *The Golembe Reports*, 2 and 3.
- Haubrich, Joseph G. and James B. Thomson. 2005. Umbrella Supervision. Federal Reserve Bank of Cleveland *Economic Commentary*, September 15.
- Helfer, Ricki. 1997. Testimony before the U.S. House of Representatives Committee on Banking and Financial Services, Subcommittee on Capital Markets, Securities and Government Sponsored Enterprises. *Financial Modernization.* 105th Cong., 1st sess., March 5.
- Hoening, Thomas M. 1996. Rethinking Financial Regulation. Federal Reserve Bank of Kansas City *Economic Review* 81, no.2:5-13.
- Horvitz, Paul M. 1982. Consolidation of the Regulatory Agency Structure: Has the Time for It Come? Federal Reserve Bank of Atlanta *Economic Review*, 43-52.
- . 1987. Reorganization of the Financial Regulatory Agencies. In *Financial Institutions and Markets in a Changing World*, edited by Donald R. Fraser and Peter S. Rose, 122-45. Irwin.
- Hunt Commission. 1971. *Report of the President's Commission on Financial Structure and Regulation.* Washington, D.C. U.S. Government Printing Office.
- Kwast, Myron L. 1996. Supervising the Universal Bank. In *Universal Banking: Financial System Design Reconsidered*, edited by Anthony Saunders and Ingo Walter, pp. 743-49. Irwin.
- McDonough, William. 1997. The Changing Role of Supervision. Before the Meeting of the Institute of International Bankers, September 10.
- Meyer, Laurence H. 1999. Remarks. Before the Institute of International Bankers Annual Breakfast Dialogue, September 27.



- Office of the Comptroller of the Currency (OCC). 2003. National Banks and the Dual Banking System. OCC.
- Olson, Mark W. 2002. The European Union's Financial Services Action Plan. The European Union's Financial Services Action Plan and Its Implications for the American Financial Services Industry: Testimony before the U.S. House of Representatives Committee on Financial Services. 107th Cong., 2nd sess., May 22.
- Peek, Joe, Eric S. Rosengren and Geoffrey M.B. Tootell. 1999. Using Bank Supervisory Data to Improve Macroeconomic Forecasts. Federal Reserve Bank of Boston New England *Economic Review*, Sept/Oct.
- . 2001. Synergies between Bank Supervision and Monetary Policy. In *Prudential Supervision*, edited by Frederic S. Mishkin, 273-93. The University of Chicago Press.
- Peterson, Manfred O. 1977. Conflicts Between Monetary Policy and Bank Supervision. *Issues in Bank Regulation*, Autumn.
- Pianalto, Sandra. 1984. Reorganizing the U.S. Banking Regulatory Structure. Federal Reserve Bank of Cleveland *Economic Commentary*, April 9.
- Powell, Donald E. 2002. What Can Bank Regulators Do Better? In *Proceedings of the 38th Annual Conference on Bank Structure and Competition*, 16-20. Federal Reserve Bank of Chicago.
- . 2004. Remarks before the National Association for Business Economics. Washington, D.C., March 26.
- Raines, Franklin D. 2004. Remarks before the Federal Reserve Bank of Chicago's 40th Annual Conference on Bank Structure & Competition, Chicago, IL., May 7.
- Schooner, Heidi M. 1998. Regulating Risk Not Function. *University of Cincinnati Law Review* 66, no.2:441-88.
- . 2002. Functional Regulation: The Securitization of Banking Law. *Banking Law*, 188-200.
- . 2003. The Role of Central Banks in Bank Supervision in the United States and the United Kingdom. *Brooklyn Journal of International Law* 28, no.2:411-44.
- Schooner, Heidi M. and Michael Taylor. 1999. Convergence and Competition: The Case of Bank Regulation in Britain and the United States. *Michigan Journal of International Law* 20, no.4:595-655.
- . 2003. United Kingdom and United States Responses to the Regulatory Challenges of Modern Financial Markets. *Texas International Law Journal* 38, no.2:317-46.
- Shad, John S.R. 1982. Statement. In *Hearings before the Senate Committee on Banking, Housing, and Urban Affairs Subcommittee on Securities*. 97th Cong. 2nd sess.
- Spong, Kenneth. 2000. *Banking Regulation: Its Purposes, Implementation, and Effects*. Federal Reserve Bank of Kansas City.
- Syron, Richard F. 1994. The Fed Must Continue to Supervise Banks. Federal Reserve Bank of Boston *New England Economic Review*, Jan/Feb:3-8.

## Restructuring Federal Bank Regulation

---

- U.S. Department of the Treasury. 1991. *Modernizing the Financial System: Recommendations for Safer, More Competitive Banks*. Department of the Treasury.
- Wall, Larry D. and Robert A. Eisenbeis. 1999. Financial Regulatory Structure and the Resolution of Conflicting Goals. *Journal of Financial Services Research* 16, nos.2 and 3:133-45.
- Wallison, Peter J. 1999. The Fed's Dual Roles as Monetary Authority and Bank Supervisor. Speech before the Support Group for Modern National Banking, Washington, D.C., May 24.
- . 2003. Remarks. Presented at the American Enterprise Institute Conference, *Is Consolidated Financial Regulation Appropriate for the United States?* February 21.
- Weinberg, John A. 2002. Competition among Bank Regulators. Federal Reserve Bank of Richmond *Economic Quarterly*, Fall:19-36.

## APPENDIX

### Past Proposals for Regulatory Restructuring

This appendix briefly describes the 24 major proposals for regulatory restructuring that have been made (but not acted on) since the bulk of the federal regulatory system was instituted in the early 1930s.

1. **Brookings Study.** In the 1930s, the Brookings Institution analyzed the federal bureaucracy for a Senate committee. Among the recommendations was one to reorganize the bank regulatory structure. The FDIC would have become the principal federal bank regulator, the OCC would have been abolished, and the Federal Reserve's examination and supervisory responsibilities for state banks would have been transferred to the FDIC.

2. **Hoover Commission.** In 1949, three Hoover Commission task forces recommended that federal bank regulatory authority be centralized. One task force wanted to transfer the FDIC to the Federal Reserve, the second wanted to transfer the OCC to the Federal Reserve, and the third wanted to fold both the FDIC and the OCC into the Federal Reserve. The Commission itself opted for a fourth approach, recommending that the FDIC be transferred to the Treasury Department.

3. **Commission on Money and Credit.** In 1961, the Commission on Money and Credit recommended that the functions of the FDIC and the OCC be transferred to the Federal Reserve.

4. **Advisory Committee on Banking.** In 1962, the OCC's Advisory Committee on Banking proposed eliminating the Federal Reserve's bank supervisory role. All supervisory authority relating to national banks would have been exercised by the OCC. All supervisory authority relating to state banks would have been exercised by the FDIC, which would have been placed within the Treasury Department.

5. **Patman Bill.** A proposal in 1965 by House Banking Committee Chairman Wright Patman,

H.R. 6885, would have consolidated all federal bank regulation, including deposit insurance functions, in the Treasury Department.

6. **Hunt Commission.** In 1971 the Hunt Commission, formally titled the Presidential Commission on Financial Structure and Regulation, recommended the establishment of three new independent agencies: (1) the Administrator of National Banks, which would have replaced the OCC; (2) the Administrator of State Banks, which would have assumed the supervisory functions of the FDIC and the Federal Reserve; and (3) the Federal Deposit Guarantee Administration, which would have incorporated the FDIC, the FSLIC, and the credit union insurance agency.

7. **Compendium of Major Issues in Bank Regulation.** In 1975 the Senate Banking Committee commissioned a series of papers on issues of structural reform from preparers outside the government. Several papers recommended that the FDIC become the primary federal bank supervisor, mainly because the deposit insurer has ultimate responsibility for all bank supervisory activities.

8. **Wille Proposal.** In testimony before Congress in 1975, FDIC Chairman Frank Wille proposed the creation of a five-member Federal Banking Board to administer the deposit insurance system. He also called for a Federal Supervisor of State Banks to assume the combined supervisory functions of the FDIC and the Federal Reserve vis-à-vis state banks.

9. **FINE Study.** In 1975, the House Banking Committee held a series of hearings on regulatory structure. The product of the hearings was a four-volume work titled *Financial Institutions and the Nation's Economy (FINE)* "Discussion Principles." The study recommended the establishment of a Federal Depository Institutions Commission to administer all supervisory functions of the FDIC, the Federal Reserve, the OCC, the FHLBB, and the NCUA. Insurance functions

would be handled by a subsidiary agency within the commission.

10. **Senate Governmental Affairs Committee Proposal.** In 1977, the Senate Governmental Affairs Committee recommended the consolidation of the bank regulatory agencies into a single agency. The Consolidated Banking Regulation Act of 1979 would have merged supervisory functions into a five-member Federal Bank Commission.

11. **Deposit Insurance in a Changing Environment.** In a 1983 study, the FDIC recommended the merger of the FSLIC into the FDIC. In addition, it recommended that the FDIC be removed from all regulatory functions not directly related to safety and soundness. The bank and thrift regulatory and supervisory functions of the Federal Reserve Board, the OCC, and the FHLBB would be consolidated in a new separate agency. The FDIC would have the authority to conduct examinations, require reports, and take enforcement actions, but it would limit its attention to problem and near-problem institutions.

12. **Bush Task Group.** In 1984, the Task Group on Regulation of Financial Services, chaired by then-Vice President George H.W. Bush, produced *Blueprint for Reform*. The recommendations would have reduced the number of agencies involved in day-to-day bank supervision from three to two. A new Federal Banking Agency (FBA) would continue the OCC's supervisory responsibilities. The Federal Reserve would take over supervision of all state-chartered banks except banks in states where the state supervisory authorities were "certified" to perform the function themselves. Except for about 50 international-class holding companies, the federal supervisor—the FBA or the Federal Reserve—of a bank would also supervise the parent holding company. The Federal Reserve would supervise the internationals. The FDIC would lose day-to-day supervisory authority; its responsibilities would be confined to providing deposit insurance, although it would be able to examine troubled banks in conjunction with their primary supervisor. Finally, functional regulation would play a

role in that enforcement of antitrust and securities laws would be transferred to the Justice Department and the Securities and Exchange Commission, respectively.

13. **Depository Institutions Affiliation Act (DIAA).** The DIAA was a piece of legislation that languished in several Congresses in the 1980s. The act would have established a National Financial Services Committee consisting of the chairmen of the Federal Reserve, the FDIC, the SEC, and the Commodity Futures Trading Commission; the Secretaries of Commerce and the Treasury; the Comptroller of the Currency; and the Attorney General. The committee would seek to establish uniform principles and standards for the examination and supervision of financial institutions and other providers of financial services.

14. **National Commission on Financial Institution Reform, Recovery and Enforcement.** In Subtitle F, Title XXV, of the Comprehensive Crime Control Act of 1990, Congress created an independent commission to examine the thrift crisis of the 1980s and to make appropriate recommendations. In its study, *Origins and Causes of the S&L Debacle: A Blueprint for Reform*, the commission recommended that federal deposit insurance be limited to accounts in "monetary service companies," which would be able to invest only in short-term, highly rated market securities. A corollary recommendation was that the FDIC be made the sole federal insurer of depository institutions and the sole federal charterer and regulator of insured institutions. The OCC and the OTS would be eliminated. The FDIC would remain an independent agency but would be required to consult regularly with the Federal Reserve and make available to it all pertinent information about the condition of insured depository institutions. The Federal Reserve would appoint an independent Oversight Board to evaluate new and proposed programs, statutes, rules, and regulations. The Oversight Board would not take actions on its own but would report its findings and recommendations to Congress and the public.

15. **Modernizing the Financial System.** The regulatory structure recommendations of the 1991 Treasury-led study of the federal deposit insurance system largely followed the recommendations of the 1984 Bush Task Force. The four federal banking regulators—the Federal Reserve, the FDIC, the OCC, and the OTS—would be reduced to two, and the same federal regulator would be responsible for both a bank holding company and its subsidiary banks. A new Federal Banking Agency (FBA) within the Treasury Department would succeed to the responsibilities of both the OCC and the OTS. The FBA would also be responsible for the bank holding company parents of national banks. The Federal Reserve would have responsibility for all state-chartered banks and their parent holding companies. The Federal Reserve and the FBA would jointly agree on bank holding company regulatory policies. The FDIC would focus solely on the deposit insurance system and on the resolutions of troubled banks and thrifts.

16. **H.R. 1227, the Bank Regulatory Consolidation and Reform Act.** This 1993 bill, introduced by Representative Jim Leach, would have combined the OCC and the OTS into a separate independent federal banking agency that would regulate all federally chartered thrifts and their holding companies as well as national banks and their holding companies unless a holding company's assets exceeded \$25 billion. The FDIC would regulate all state-chartered thrifts and their holding companies as well as state-chartered banks and their holding companies unless a holding company's assets exceeded \$25 billion. Bank holding companies with assets above \$25 billion, and their subsidiary banks, would be regulated by the Federal Reserve.

17. **H.R. 1214, S. 1633, the Regulatory Consolidation Act.** These 1993 bills, introduced in the House by Banking Committee Chairman Henry Gonzalez and in the Senate by Banking Committee Chairman Donald Riegle, would have consolidated federal bank and thrift regulatory functions into a single independent commission, the Federal Banking Commission. The OCC and

the OTS would be abolished. The Federal Reserve would continue to manage monetary policy. The FDIC would continue to administer deposit insurance and exercise conservatorship and receivership functions, but its regulatory duties with respect to nonmember banks would be transferred to the commission. The bills differed in several respects. The main differences were the number of members on the independent commission and the composition of the FDIC Board of Directors. Under the House bill, the commission would have seven members: the Secretary of the Treasury, the Chairman of the Federal Reserve Board, the Chairman of the FDIC, and four public members, one of whom would serve as the commission's chairman. The five-member FDIC Board of Directors would be composed of the chairman of the commission and four public members, one of whom would be the FDIC Chairman. (And the commission would have a consumer division to enforce consumer protection laws.) Under the Senate bill, the commission would have five members: the Secretary of the Treasury or his or her designee, a Federal Reserve Board Governor, and three public members. The five-member FDIC Board would be composed of the Secretary of the Treasury or his or her designee, the chairman of the commission, and three public members, one of whom would be the FDIC Chairman.

18. **Clinton Administration.** In a November 1993 document titled "Consolidating the Federal Bank Regulatory Agencies," the Treasury Department proposed the consolidation of federal bank and thrift regulatory functions in an independent Federal Banking Commission (FBC). The proposal is similar to the approaches of H.R. 1214 and S. 1633. The FDIC would be limited to insurance functions, including the handling of failed and failing institutions. The Federal Reserve would keep its central banking functions but would have no primary bank regulatory responsibilities, although it would be able to participate in the FBC's examination of a limited number of banking organizations—the ones most significant to the payments system. The states would continue to regulate the banks they char-

ter. Thus, state banks would be regulated by both the FBC and the states. The FBC would have five members: a chairperson appointed by the president; the Secretary of the Treasury or his or her designee; a member of the Federal Reserve Board, selected by the Board; and two other presidentially appointed members. An early 1994 revision of the proposal expanded the Federal Reserve Board's participation to include joint examinations of a sampling of both large and small banks, joint examinations of the largest bank holding companies, lead examinations of holding companies whose main bank is state chartered, and backup authority to correct emergency problems in any of the 20 largest banks.

**19. Federal Reserve Board.** In January 1994, Federal Reserve Board Governor John P. LaWare advanced a five-component plan. First, the OCC and the OTS would be merged. The resulting agency might be called the Federal Banking Commission (FBC). Second, the FDIC would be removed as a regulator of healthy institutions. It would keep its insurance functions. Third, examination by charter would be replaced by the principle of one organization, one examiner. The FBC would examine organizations whose lead depository institution was a national bank or thrift. The Federal Reserve would examine organizations whose lead depository institution was state chartered. Fourth, as an exception to the previous point, a small number of financially important organizations would be treated somewhat differently. The holding companies and nonbank subsidiaries would be regulated and supervised by the Federal Reserve, whereas the bank subsidiaries would be regulated and supervised by the primary regulator of the lead bank. Fifth, the Federal Reserve would remain in charge of holding company rulemaking and supervision as well as the regulation of foreign banks. The FBC would write rules for national institutions, and the Federal Reserve would write rules for state institutions, but the two regulators would be required to make their rules as consistent (each with the other's) as possible.

**20. H.R. 17, the Bank Regulatory Consolidation and Reform Act.** This 1995 bill, introduced by House Banking Committee Chairman Jim Leach, is similar but not identical to Leach's 1993 proposal (H.R. 1227). The OCC and the OTS would be consolidated into a new independent agency, the Federal Banking Agency, which would regulate all federal depository institutions (except those that are subsidiaries of depository institution holding companies regulated by the Federal Reserve or the FDIC); savings and loan holding companies whose principal depository institution subsidiary was a federal savings association; and bank holding companies that had consolidated depository institution assets of less than \$25 billion and whose principal depository institution subsidiary had a federal charter. The FDIC would regulate all state-chartered nonmember depository institutions except those that were subsidiaries of depository institution holding companies regulated by the Federal Banking Agency or the Federal Reserve; savings and loan holding companies whose principal depository institution subsidiary was a state savings association; and bank holding companies that had consolidated depository institution assets of less than \$25 billion and whose principal depository institution subsidiary was a state-chartered nonmember depository institutions. The Federal Reserve would regulate all state-chartered Federal Reserve-member depository institutions except those that were subsidiaries of depository institution holding companies regulated by the Federal Banking Agency or the FDIC; bank holding companies that had consolidated depository institution assets of less than \$25 billion and whose principal depository institution subsidiaries were state-chartered Federal Reserve-member depository institutions; and all bank holding companies with consolidated depository institution assets of \$25 billion or more.

**21. Federal Deposit Insurance Act Amendment of 1995.** House Banking Committee Vice Chairman Bill McCollum included a regulatory restructuring proposal in a bill (H.R. 1769) he introduced to capitalize the Savings Association Insurance Fund and spread the debt service costs

of the Financing Corporation to all FDIC-insured institutions. The McCollum proposal would consolidate the OCC and the OTS into a new independent agency similar to that in the Leach bill (H.R. 17).

**22. *The Thrift Charter Convergence Act of 1995.*** Representative Marge Roukema included a regulatory restructuring proposal in a bill (H.R. 2363) she introduced to capitalize the Savings Association Insurance Fund and spread the debt service costs of the Financing Corporation to all FDIC-insured institutions. The Roukema proposal provided for the conversion of federal savings associations into banks; the treatment of state savings associations as banks for purposes of federal banking law; the abolition of the OTS; and the transfer of OTS employees, functions, and property to the OCC, the FDIC, and the Federal Reserve, as appropriate.

**23. *General Accounting Office.*** In testimony before Congress in May 1996, the General Accounting Office, based largely on a review of foreign bank regulatory systems, made four recommendations for changes in the U.S. bank regulatory system. First, the number of federal agencies with primary responsibilities for bank oversight should be reduced by consolidating the OTS, the OCC, and the FDIC's primary supervisory responsibilities into a new agency. Second, the Federal

Reserve and the Treasury Department should be included in some fashion in bank oversight. Third, the FDIC should have the necessary authority to protect the deposit insurance funds. Fourth, mechanisms to help ensure consistent oversight and reduce regulatory burden should be incorporated into the regulatory system.

**24. *Financial Modernization, 105th Congress.*** Financial modernization was a topic of broad interest in the 105th Congress (1997–1998). As reported out of the House Banking Committee in June 1997, H.R. 10, the Financial Services Competition Act of 1997, combined elements of several bills, including the House version of the Depository Institution Affiliation Act and a Department of the Treasury proposal. Regarding regulatory restructuring, H.R. 10 would have abolished the OTS, merging it into the OCC, and would have created a National Council on Financial Services composed of the Secretary of the Treasury; the Chairmen of the Federal Reserve Board, the FDIC, the SEC, and the CFTC; the Comptroller of the Currency; a state securities regulator; a state banking supervisor; and two presidential appointees with experience in state insurance regulation. These regulatory restructuring measures were not in the version of H.R. 10 that was passed by the House in May 1998, and they were not revived in later versions of the bill.

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# Consolidation in the U.S. Banking Industry: Is the “Long, Strange Trip” About to End?

by *Kenneth D. Jones and Tim Critchfield\**

In 1995, the Brookings Institution published a paper entitled “The Transformation of the U.S. Banking Industry: What a Long, Strange Trip It’s Been.”<sup>1</sup> Using a breathtaking array of facts and figures, the paper described in great detail the dramatic changes that had occurred in the U.S. commercial banking industry over the 15 years from 1979 to 1994. The banking industry was transformed during that period, according to the paper (p. 127), by “the massive reduction in the number of banking organizations; the significant increase in the number of failures; the dramatic rise in off-balance sheet activities; the major expansion in lending to U.S. corporations by foreign banks; the widespread adoption of ATMs; . . . and the opening up of interstate banking markets.” The paper went on to explain that most of these major changes in banking could be traced to two developments: (1) the extraordinary number of major regulatory changes during the period, from deposit deregulation in the early 1980s to the relaxation of branching restrictions later in the decade; and (2) clearly identifiable innovations in technology and applied finance, including improvements in information processing and telecommunication technologies, the securitization and sale of bank loans, and the development of derivatives markets.

Other research would later confirm the paper’s assessments and its explanation of the course of events in the banking industry over the period 1979–1994.

Yet, nearly a decade after the publication of that paper, data indicate that the transformation of the banking industry is ongoing and that the number of banking organizations continues to decline—though recently there have been signs that the number of organizations is beginning to stabilize. In fact, when we take a closer look at the data, we find that the rate of decline in the number of banking organizations appears to be slowing markedly. Indeed, if the data from the past few years indicate anything about future direction, the rate of decline can be expected to slow even more over the next five-year period. Moreover, some evidence suggests that this slowdown in the rate of decline might presage a return to a relatively stable

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<sup>1</sup> Berger, Kashyap, and Scalise (1995).



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population of banking organizations. Such a result would be in sharp contrast to conventional wisdom—which foresees continued consolidation of the banking industry in the United States.

Because this paper is part of a collective review of the U.S. banking industry's past and an anticipation of its future, many aspects of the industry's transformation are discussed in companion papers.<sup>2</sup> Our focus, therefore, is primarily on industry structure: how it has already changed and how it might evolve in the future. Accordingly, we begin with an updated review of the structural changes that occurred in the industry over the two decades 1984–2003. This should give us a better understanding of the scope of the decline that has taken place. We then review the causes of this decline and the literature on how the decline has affected such things as asset concentration, banking competition, efficiency, profitability, shareholder value, and the availability and pricing of banking services. After this analysis of the past, we offer some projections of future banking industry structure.

### Overview of Structural Change in the U.S. Banking Industry 1984–2003

Over the two decades 1984–2003, the structure of the U.S. banking industry indeed underwent an

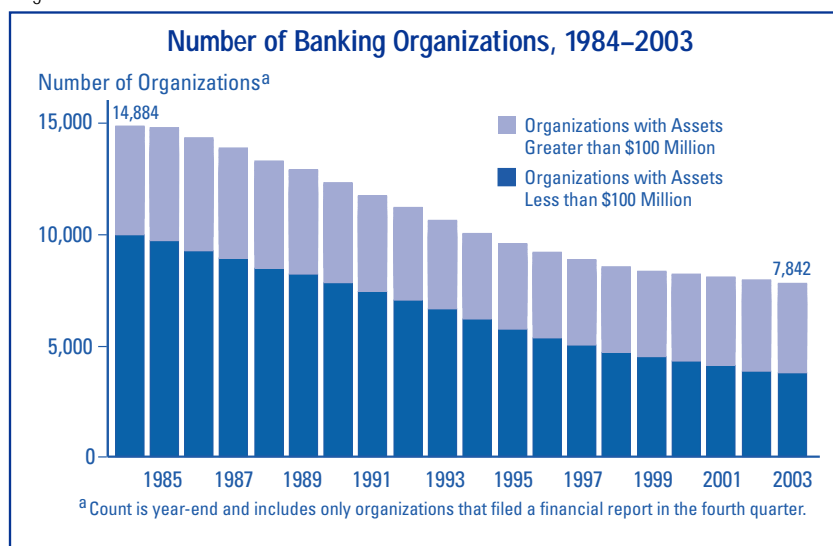
almost unprecedented transformation—one marked by a substantial decline in the number of commercial banks and savings institutions and by a growing concentration of industry assets among a few dozen extremely large financial institutions. This is not news. As mentioned above, the decline in the number of banking organizations has been ongoing for more than two decades and has been well documented in the literature.<sup>3</sup> Nevertheless, a brief overview will serve to clarify both the scope of the decline and the increasing concentration of assets among the nation's largest banking organizations.<sup>4</sup>

<sup>2</sup> In 2004, the FDIC released its findings from a comprehensive research project looking into the future of banking. The study as a whole projects likely trends in the structure and performance of the banking industry and anticipates the policy issues that will confront the industry and the regulatory community in the coming years. Copies of the research papers making up the study can be obtained at <http://www.fdic.gov/bank/analytical/future/index.html>.

<sup>3</sup> Discussions about the declining number of banks can be found not only in the paper already mentioned (Berger, Kashyap, and Scalise [1995]) but also in Berger, Demsetz, and Strahan (1999); Hughes, Lang, Mester, and Moon (1999); and the Group of Ten (2001).

<sup>4</sup> Data limitations at the level of banking organizations restrict our analysis to the years 1984–2003. And because the number of commercial banks alone peaked in 1984 at 14,496, we use that year as the beginning of our discussion of the consolidation trend, even though in certain respects the transformation of the U.S. banking industry may be said to have begun earlier.

Figure 1



**Industry Size**

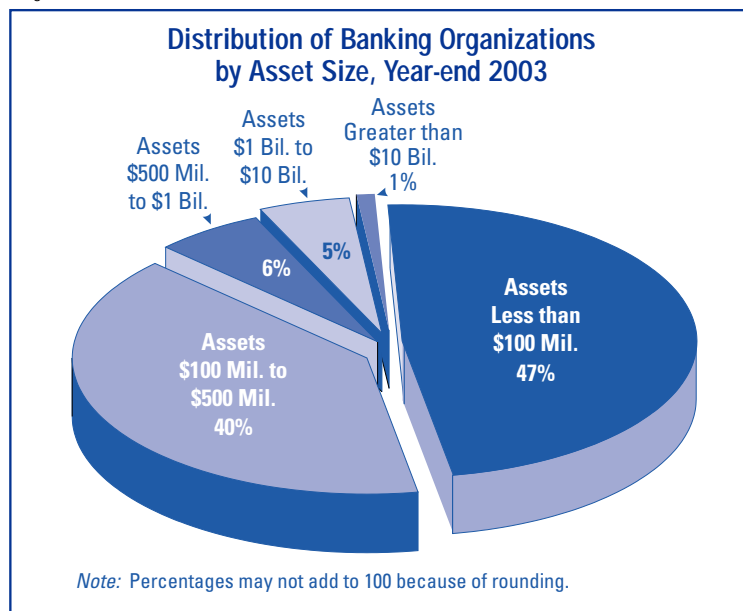
At year-end 1984, there were 15,084 banking and thrift organizations (defined as commercial bank and thrift holding companies, independent banks, and independent thrifts).<sup>5</sup> By year-end 2003, that number had fallen to 7,842—a decline of almost 48 percent (figure 1). Distributed by size, nearly all the decline occurred in the community bank sector (organizations with less than \$1 billion in assets in 2002 dollars), and especially among the smallest size group (less than \$100 million in assets in 2002 dollars).<sup>6</sup> Yet the community banking sector still accounts for 94 percent of banking organizations (figure 2).

Geographically, the decline in the number of banking organizations appears to have been remarkably uniform across a variety of regions and markets. Critchfield et al. (2004), for example, examined the decline of community banks across four market segments—rural markets, small metropolitan markets, and suburban and urban parts of large metropolitan markets—and found that the declines across all four markets were proportionally similar (figure 3). The dynamics underlying the declines, however, differed depending on the market. Rural areas, for example, saw proportionally fewer mergers and very little de novo entry in comparison with both small and large metro markets, where a larger number of mergers was partially offset by a larger number of new-bank start-ups.

Overall, the bulk of the decline in the number of organizations between year-end 1984 and year-end 2003 was due to unassisted mergers and acquisitions (see figure 4, which decomposes the net change in the number of banking organizations into several components).<sup>7</sup> In every year but one, mergers and acquisitions were the single largest contributor to the net decline in banking organizations.<sup>8</sup> During the entire period, 8,122 individual bank and thrift organizations disappeared through unassisted mergers and holding company purchases.

From 1985 through 1992, though, failures also contributed significantly to the decline in the number of banking organizations (figures 4 and 5). Of the 2,698 bank and thrift closings caused by failure during the entire period 1984–2003,<sup>9</sup> almost 75 percent of them occurred in the five years 1987–1991, when failures averaged

Figure 2



<sup>5</sup> The expansion of banking powers over the period we are studying has left few differences between commercial banks and savings institutions (thrifts), so unless otherwise specified, our analysis combines the two types of institutions. Moreover, we focus on top-tier organizations rather than on individual institutions in order to avoid counting multiple charters belonging to a single corporate entity. The count here for year-end 1984 (15,084) includes all active organizations, whereas figure 1 (which shows a total of 14,884 organizations for year-end 1984) includes only organizations that filed a financial report at the end of 1984.

<sup>6</sup> Asset size classes have been adjusted for inflation using the GDP price deflator with 2002 as the base year. Hence, the number of banks in 2003 that had less than \$100 million in assets is comparable to the number of banks in 1984 that had less than \$66 million in assets.

<sup>7</sup> "Other additions" included in figure 4 were non-FDIC-insured institutions that became FDIC-insured, often transferring from state insurance programs in the mid-1980s. "Other changes" were voluntary liquidations of organizations.

<sup>8</sup> The sole exception was 1989, when the savings and loan (S&L) and banking crises were near their peak.

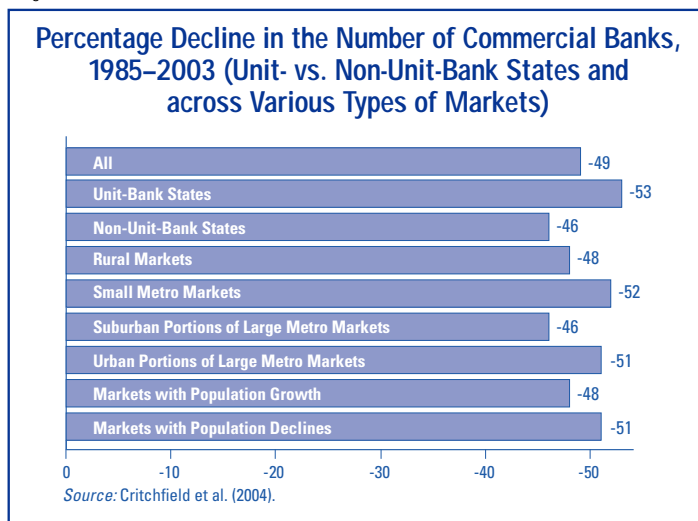
<sup>9</sup> This number includes not only 2,262 organizations (including multibank holding companies) that were eliminated because of failure but also individual charters that were merged into other charters with FDIC assistance; however, it does not include insolvent institutions that remained open with FDIC financial assistance.

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388 per year.<sup>10</sup> In contrast, from 1994 to 2003 only 66 institutions failed—a figure that reflects greatly improved economic conditions and stronger safety-and-soundness regulation.

The decline caused by mergers, acquisitions, and failures was partially offset by the entry of 3,097 new banking organizations between year-end 1984 and year-end 2003. This number is remarkable, given the overriding downward trend. During the entire period, the number of de novo bank entrants averaged 163 per year, even though the creation of new banks was suppressed at the height of the thrift and banking crises. The number of start-up institutions peaked in 1984, then declined each year until 1993; then, as economic conditions improved and more capital became available, de novo entry into the banking industry resumed and continued through the end of the century.

Figure 3



With the beginning of an economic recession in March 2001, the number of new charter formations again began decreasing.

As indicated by the trends in mergers, acquisitions, and failures on the one hand, and start-ups on the other hand, the pace of the decline in the number of banking organizations has not been uniform. Indeed, graphing the rate of change reveals a very strong cyclical pattern, with declines occurring at a rate that increased in the 1980s, only to slow in the 1990s (figure 6). Since 1992 the rate of decline in the number of institutions has trended consistently lower. (This pattern has important implications for our projections of the structure of the industry.)

### Industry Concentration

At the same time that the number of banking organizations was decreasing, industry assets were increasing. Over the 1984–2003 period, banking industry assets grew from \$3.3 trillion to \$9.1 trillion—an increase of nearly 70 percent in real terms.<sup>11</sup> Existing assets and asset growth,

<sup>10</sup> The number of failures peaked in 1989, when 536 banks and thrift institutions failed.

<sup>11</sup> We determined real growth by adjusting nominal dollars for inflation using the GDP chain-type price deflator, with 2002 selected as the base year.

Figure 4

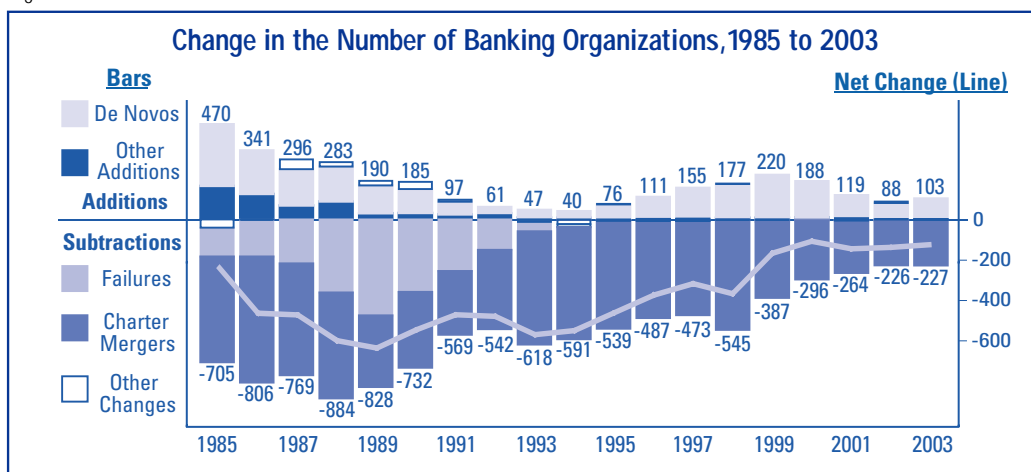


Figure 5

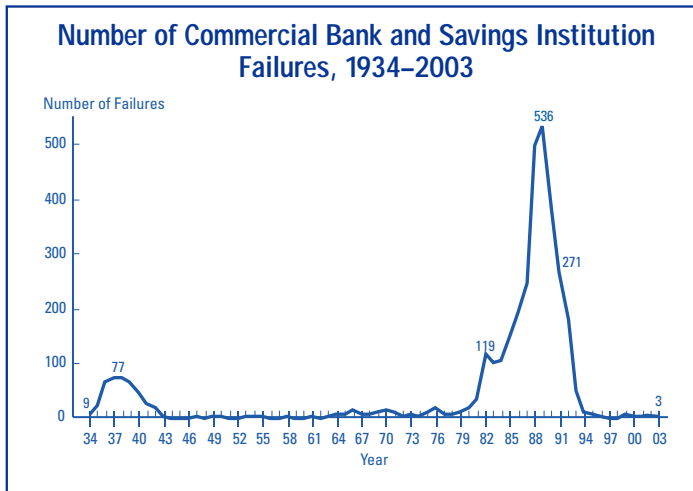


Figure 6

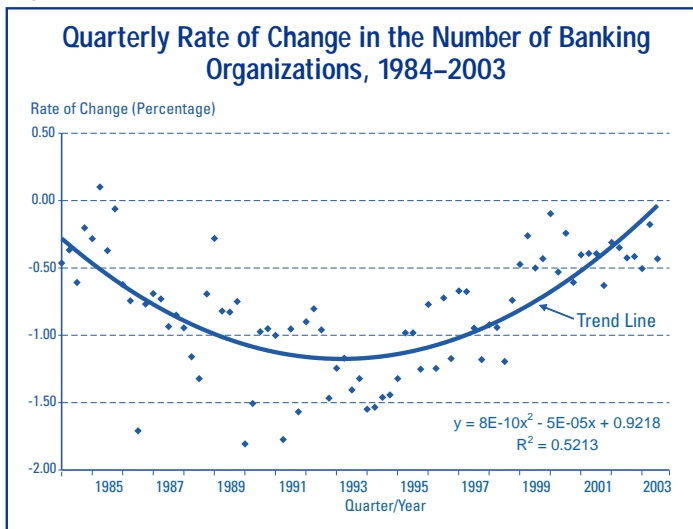
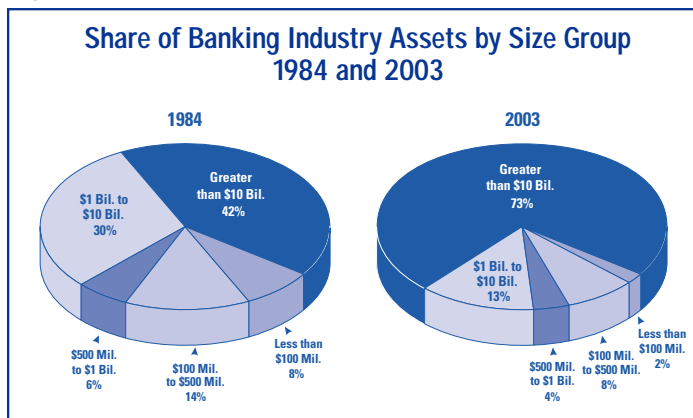


Figure 7



however, were not evenly distributed across the industry but, instead, were becoming more and more concentrated among the nation’s largest financial institutions. This trend can be seen in figure 7, which compares asset share over time for each of five size groups during our period. The asset share of the largest size group—organizations with more than \$10 billion in assets—increased dramatically, rising from 42 percent in 1984 to 73 percent in 2003. In contrast, the share of industry assets held by community banks (organizations with less than \$1 billion of assets) dropped from 28 percent in 1984 to only 14 percent in 2003; and the smallest banks, organizations with less than \$100 million in assets, accounted as a group for only 2 percent of industry assets in 2003—compared with 8 percent in 1984.

In terms of deposits, industry concentration has been equally dramatic: a quarter of the nation’s domestic deposits are now controlled by just 3 organizations (see table A.1), whereas in 1984 that same proportion was held by 42 companies. At year-end 2003, Bank of America Corporation, the largest holder of domestic bank deposits, held approximately \$512 billion in domestic deposits (9.8 percent of the industry) and had \$870 billion in assets (9.6 percent of the industry).<sup>12</sup> Also at year-end 2003, the 3,683 banking organizations that each held less than \$100 million in assets accounted as a group for only \$192 billion of industry assets (2 percent, as noted above) and \$160 billion (3 percent) of domestic deposits.

Analyzing banking industry concentration, Moore and Siems (1998) and Rhoades (2000) found that, despite some recent

<sup>12</sup> In October 2003, Bank of America announced that it would acquire the nation’s eighth-largest bank—FleetBoston Financial—in a \$47 billion all-stock transaction. Our numbers are for the combined organization based on year-end 2003 data.

increases, national and local measures of concentration had remained, on average, relatively low.<sup>13</sup> This was surprising, given that many mergers had been of the within-market type—those most likely to result in increases in concentration. Hence, despite the heightened merger activity among banks over the two decades 1984–2003, it appears that current concentration measures generally remain below the level where monopolistic behavior might manifest itself. Part of the reason may be that deregulatory efforts to lower entry barriers and expand bank powers—helped along by advances in technology—have resulted in an expanded geographic reach of competitors. Competition from nonbank financial market participants also provides an important check on market power. However, Rhoades (2000) does caution that, although MSA (metropolitan statistical area) market concentration remains fairly low on average, it has nonetheless increased substantially since 1984, and the increase suggests that in the future there is likely to be a growing number of MSA markets in which bank merger proposals raise significant competitive issues.

### Fundamental Causes of Consolidation

Naturally policy makers, academics, and others have wanted to know the “why” of consolidation. Why, after decades of seeming to change so little, did the industry begin to consolidate and restructure itself so dramatically? There is no single reason for the consolidation trend and no single underlying cause. Rather, the trend might best be viewed as the result of a combination of macro- and microeconomic factors: external forces that fundamentally and irrevocably changed the environment in which banks operated, and banks’ strategic responses to those environmental forces (ostensibly with the goal of maximizing shareholder value). Previous studies of the consolidation phenomenon have examined and discussed the various factors at considerable length. Berger, Kashyap, and Scalise (1995), Berger, Demsetz, and Strahan (1999), and Shull and Hanweck (2001), in particular, offer broad reviews of the literature.<sup>14</sup>

### Environmental Factors

At the macroeconomic level, consolidation has been driven by exogenous changes in the banking industry’s economic environment, and these changes have often worked in concert to encourage consolidation. Foremost among them have been globalization of the marketplace, technological change, deregulation, and major macroeconomic events (such as the thrift and banking crises of the 1980s and the early 1990s, and the economic and stock market boom of the late 1990s). Globalization and technological change have been persistent forces for change over the entire period, and deregulation (in its various manifestations) has been a recurring enabling force. In contrast, the strength and influence of major macroeconomic events have varied over time. For example, the economic forces that led to the thrift and banking crises were influential primarily in the middle to late 1980s and early 1990s; by the mid-1990s the crises were over, and bank and thrift failures were no longer a major contributor to industry consolidation. Similarly, the influence of the economic growth and stock market boom of the late 1990s was largely restricted to a specific period. Hence, adding a temporal dimension to the discussion of the external influences on consolidation will help us not only understand the current trend but also formulate expectations about the future.

*Globalization and Technology.* Globalization began slowly in the aftermath of World War II. After that war, the major economies of the world gradually became more connected and interdependent,

<sup>13</sup> Standard measures of concentration include the Herfindahl-Hirschmann Index (HHI—defined as the sum of the squares of the individual market shares of all banks in the market) and the three-firm concentration ratio (CR3—that is, the percentage of deposits accounted for by the three largest banking organizations in the market).

<sup>14</sup> Expanded discussions of the macroeconomic forces driving consolidation can also be found in Rhoades (2000); Hannan and Rhoades (1992); and Boyd and Graham (1998). The microeconomic underpinnings of banking consolidation are discussed in Hughes, Lang, Mester, Moon, and Pagano (2003), Milbourn, Boot, and Thakor (1999), Calomiris and Karceski (1998), and Hughes, Lang, Mester, and Moon (1996).

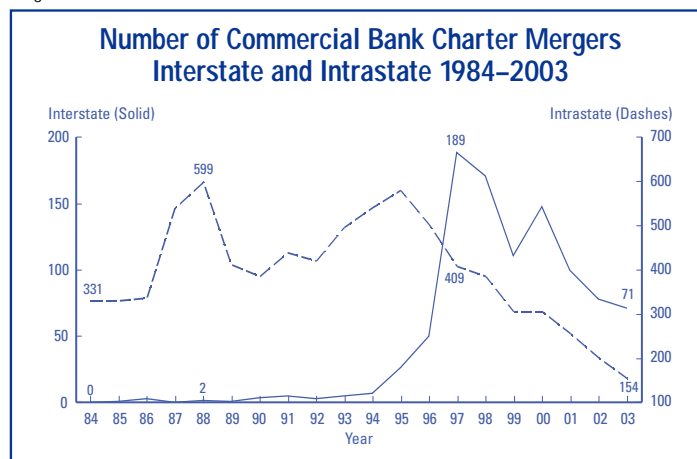
This trend toward globalization accelerated in the 1970s and 1980s—in tandem with the beginnings of what would become a revolution in information and telecommunication (ITC) technologies. Indeed, by the end of the twentieth century, technological change would affect nearly every aspect of the business of banking: the demand for banking services, the character and intensity of sector competition, and the very structure of the industry.<sup>15</sup> Through what has been described as “a protracted series of technology shocks with order-of-magnitude effects on the costs of transmitting and processing information,” advances in ITC technologies have created new advantages of scale in production and have lowered barriers to entry.<sup>16</sup>

Dramatically lowered costs and the ability to transmit information almost instantaneously around the globe effectively freed the financial services industry from the constraints of time and place. In the new global financial economy, banks, securities firms, corporations, and even individual investors became able to transfer huge amounts of capital around the globe with the click of a mouse. Yet, while these new technologies enabled financial firms of all types to exploit innovations in financial and economic theory, engineer new products, and implement new techniques for managing risk, they also resulted in a sharply more competitive marketplace for banking and financial services. To survive and prosper, banking organizations needed to respond to this new environment. Consolidation was one response. However, the strict regulatory environment that existed before the 1980s largely precluded any dramatic consolidation within the banking industry. Not until regulatory constraints were relaxed did consoli-

ation of the banking industry begin in earnest.

*Deregulation.* In the early 1980s, policy makers began a decades-long process of deregulating the banking and thrift industries so that they could be more responsive to marketplace realities (see table A.2). Over time, these legislative and other deregulatory efforts gradually (albeit haltingly) loosened the constraints on the industry, thus freeing it to cope more effectively with both the new environmental challenges and the heightened competition that resulted. In two areas—banking activities and branching—legislative and regulatory efforts were particularly important for the consolidation trend: restrictions on permissible banking activities were relaxed, and geographic limitations on branching were removed. The importance of these two efforts is perhaps best illustrated by the spate of interstate mergers that occurred immediately after passage of the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 (figure 8). Although some researchers have argued that much of the merger activity associated with the deregulatory process reflected only pent-up demand that had been long accumulating because of other causal factors, there can be no doubt about the influence of deregulation on the merg-

Figure 8



<sup>15</sup> For more detailed discussions of technology and the effects it has had on the restructuring of the financial services sector, see Berger (2003), Berger and DeYoung (2002), the Group of Ten (2001), Hunter (2001), Mishkin and Strahan (1999), and Emmons and Greenbaum (1998).

<sup>16</sup> Emmons and Greenbaum (1998), 37.

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er wave as it unfolded in the United States: if deregulation in and of itself was not a primary causal factor, it was certainly an essential enabling factor.<sup>17</sup>

*Macroeconomic Events.* In the 1970s—even before deregulation and before the full effects of the revolution in ITC technologies had been felt—a series of macroeconomic shocks combined with the twin forces of globalization and technology to dramatically alter the economic environment within which banks operated. Indeed, the decade of the 1970s saw the introduction of floating exchange rates, increased volatility in interest rates, oil price shocks, stagflation, and unexpected changes in other real economic and financial variables. These economic conditions, and governmental responses to them, began putting stress on the environment in which banks and thrifts had successfully operated, unchanged, for many decades.

In the early 1980s these stresses were intensified by double-digit inflation and then by the anti-inflationary monetary policies designed to combat it. By mid-decade, wild swings in interest rates, combined with sharp declines in oil and gas prices and in the value of real estate, precipitated a series of rolling regional recessions that wreaked havoc on the nation's S&L and banking industries. The number of failures soared, soon reaching (and then far exceeding) levels that had not been seen since the Great Depression. But as bank failures rose to record levels, so did bank mergers and acquisitions: federal regulators responded to the growing number of weak and failing depository institutions and shrinking insurance-fund balances by loosening their restrictions on mergers. The FDIC even provided financial support to encourage better-capitalized and profitable banking organizations to acquire weakened or insolvent institutions. As a result, during the 1980s the consolidation movement was particularly strong.

\* \* \*

The consolidation of the banking industry continued into, and then through, the 1990s, but it is important to note that the forces driving the trend in the 1990s differed markedly from the forces

driving it in the 1980s. Indeed, in many respects the 1980s and the 1990s were the worst of times and the best of times (respectively) for the banking industry. Banks in the 1980s were struggling under harshly unfavorable economic conditions and outdated legislative and regulatory constraints. Many banks and S&L were unprofitable. Many failed. In contrast, the middle to late 1990s saw a convergence of several factors that created an environment extremely conducive to merger activity. First, unlike the 1980s, the middle to late 1990s were a period when banks were highly profitable, flush with cash, and reveling in favorable economic and interest-rate environments. In fact, bank performance from 1993 through the end of the decade (and beyond) would set multiple records for profitability (figures 9 and 10). Second, Riegle-Neal's removal of barriers to interstate banking and branching provided opportunities for many organizations to consolidate operations and pursue geographic diversification through acquisitions. Third, a record-breaking bull market in stocks pushed market valuations of banks and thrifts to unprecedented levels, encouraging many banking firms to use their stock as currency to purchase the hard assets of other banking firms (figure 11). This was especially the case when managers believed their firms' own stocks were "favorably" priced. Conversely, managers of firms wishing to be acquired were able to maximize firm value by selling out at record market-to-book valuations. While these conditions persisted, consolidation continued at a relatively rapid pace—although it was partially offset by a rise in the number of new bank start-ups.

At the end of the decade, however, several events appeared to have had a markedly dampening effect on bank merger activity and on the pace of indus-

<sup>17</sup> As mentioned, the Riegle-Neal Act (along with regional interstate compacts that repealed interstate branching restrictions) had a significant effect on bank merger activity and industry consolidation. In contrast, the latest legislative initiative aimed at modernizing the financial services industry—the Gramm-Leach-Bliley Act of 1999 (GLB)—has not had a similar effect. As explained by Rhoades (2000), GLB provides for cross-industry mergers between banks, securities firms, and insurance companies. However, such combinations are likely to be considered by only the largest banking organizations. Moreover, by definition, the combination of a banking firm and another type of financial services provider does not result in the loss of a bank charter. Hence, the combination will have no effect on the number of banking organizations.

Figure 9

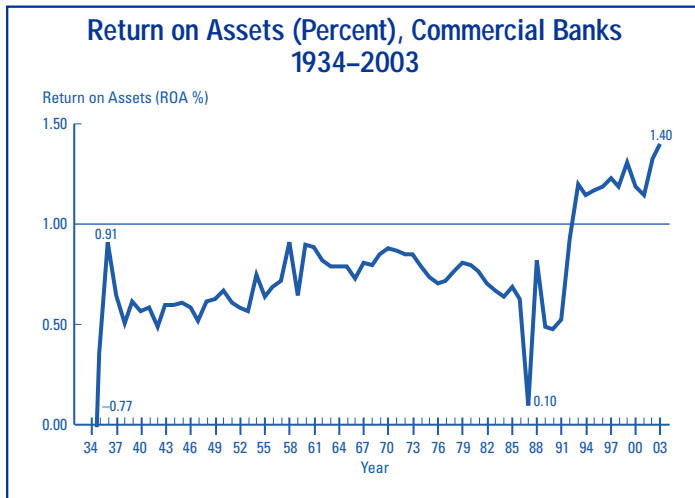


Figure 10

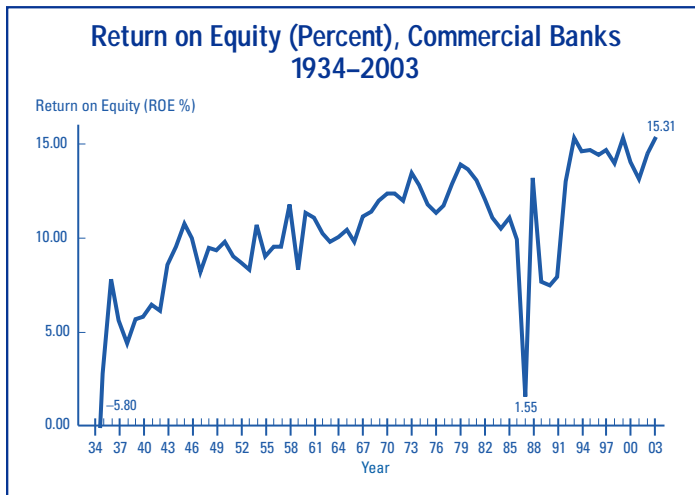
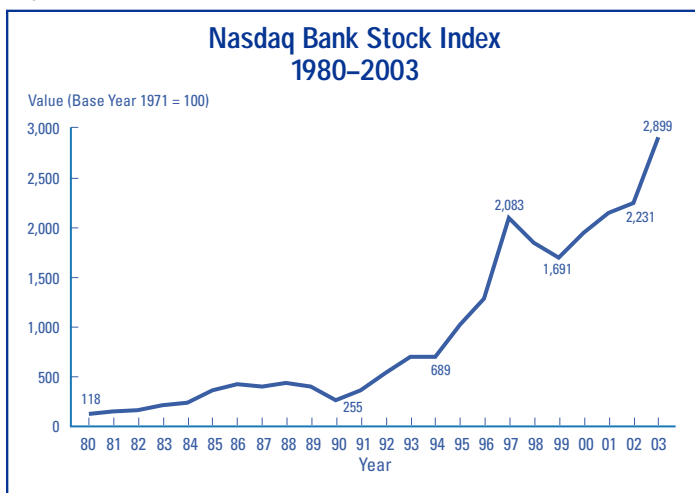


Figure 11



try consolidation. First, Y2K-related concerns might have caused some merger plans to be postponed until after the beginning of the new millennium. Then in March 2000 the record run-up in stock prices reversed itself.<sup>18</sup> A year later (in March 2001) the U.S. economy entered a mild recession. Coincident with these adverse economic developments, a significant accounting change in the way mergers were recorded served to discourage stock-funded bank merger transactions.<sup>19</sup> Finally, the terrorist attacks on the World Trade Center and the Pentagon on September 11, 2001, and the subsequent wars in Afghanistan and Iraq adversely affected the broader economic and business environments. Nevertheless, consolidation in the banking industry continued into the twenty-first century, though at a much slower rate.

### Microeconomic Factors in Merger Decisions

As we have just seen, at the macroeconomic level consolidation has been influenced by technology, deregulation, macroeconomic events, and other environmental factors. But it is the microeconomic factors that, in the aggregate, are largely responsible for the consolidation trend. These factors are the individual decisions by banking firms to pursue a merger or acquisition strategy. From a microeconomic perspective, a bank's decision to consolidate charters—to merge with or acquire another firm—should reflect management's

<sup>18</sup> For the next several years, all the major stock indexes would fall dramatically; from March 2000 to March 2003, for example, the S&P 500 benchmark fell a cumulative 43 percent.

<sup>19</sup> Financial Accounting Standards Rule 141 (FAS 141) terminated the use of pooling-of-interest accounting for business combinations after 2001 and required that purchase accounting methodology be used instead. Purchase accounting requires a firm to record goodwill if the market value of net assets acquired is less than the purchase price. Historically goodwill was amortized regularly, but now (under FAS 142) companies must test goodwill (and other intangibles) for impairment once each fiscal year. A finding of impairment may require additional noninterest-expense recognition.



chosen strategy for maximizing or preserving firm value in the face of increased competitive pressure stemming from a more market-oriented environment. For example, a merger strategy can be based on value-maximizing motives, such as achieving economies of scale and scope or reducing risk or increasing profits through geographic and product diversification. Indeed, in a recent survey of bank management, value-maximizing motives were most often cited as the principal reason to undertake a merger.<sup>20</sup>

A firm's decision to merge, however, may also be influenced by motives that do not necessarily maximize the firm's value. Adverse changes in a bank's competitive environment may compel a banking firm to undertake an acquisition as part of a purely defensive strategy, or merger decisions may be based wholly or partly on the self-serving motives of managers. (Bliss and Rosen [2001] and Ryan [1999], for example, suggest that empire building and increased managerial compensation might be the primary motive behind some bank mergers.) Another motive—suggested by Shull and Hanweck (2001), Penas and Unal (2004), and others—is a desire to obtain “too-big-to-fail” status and the funding and other competitive advantages that seem to accrue to the largest and most complex banking organizations.

Just as economic and regulatory conditions in the 1980s differed significantly from those in the 1990s, some economists have suggested that the motivations behind bank mergers in the 1980s were different from the motivations behind the mergers of the 1990s. Berger (1998, 106) observes that

Consistent with a change in merger motives, many of the merger participants in the 1980s focused on expanding their geographic bases to gain strategic long-run advantage by getting footholds in new locations, rather than on reducing costs or raising profits in the short run. Merger participants in the 1990s appear to be more focused on cutting costs quickly through mergers—for example, they often announce goals for employee layoffs, branch closings, and total cost savings in advance of mergers.

It may well be that merger motives have changed over time. Additional research will undoubtedly help us better understand if this is so.

### The Effects of Consolidation

Perhaps more important than knowing why consolidation has occurred in the U.S. banking industry is understanding what its effects have been on the banking industry, its shareholders, and the customers served. In theory, globalization, technology, and deregulation should have resulted in a significant increase in competition. Increased competition, in turn, should drive value-maximizing managers to seek greater efficiencies through consolidation. In other words, if profit-oriented managers think that there are economies of scale or scope to be gained or that opportunities exist to replace inefficient managers at other firms or to enhance profitability by servicing customers better, a competitive environment will encourage these managers to seek such economies or opportunities. Of course, the question of whether the current consolidation trend has made the banking industry more efficient or a better provider of services to the banking public is an empirical one.

Fortunately, the effects of consolidation have been a particularly active area of empirical research for more than a decade, and a consensus is beginning to form. Table A.3 gives a synopsis of these general findings. However, we should first note that researchers have faced substantial econometric difficulties in their attempts to test for efficiency and other potential gains from consolidation. Pilloff and Santomero (1998) and Calomiris and Karceski (1998), in particular, have enumerated several methodological pitfalls that make it hard to assess the effects of consolidation accurately. Among the pitfalls are these: (1) because of increased competition, efficiency gains from mergers might not be reflected in net earnings; (2) lags in performance improvement may be extensive (three to five years), especially for mergers motivated by strategic

<sup>20</sup> Group of Ten (2001).

goals such as diversification rather than by a desire to cut costs; (3) constructing a believable benchmark (for purposes of comparison) in the midst of a merger wave may be difficult; and (4) controlling for multiple causal and motivational factors over time and across mergers may be difficult. In addition to these methodological difficulties, there is also likely to be a problem reconciling the findings of studies based on 1980s data with the findings of studies that use 1990s data. Furthermore, as our chronological account indicates, the causal factors (and probably the motivations) driving mergers in the 1990s were very different from those driving mergers in the 1980s. With these qualifications in mind, we now briefly summarize the existing evidence about the effects of consolidation.

On the positive side, findings to date suggest that consolidation has resulted in somewhat greater profit efficiency (profit efficiency measures how close a bank is to earning the maximum profits that a best-practice bank would earn under the same circumstances).<sup>21</sup> According to Berger (1998), profit efficiency is enhanced by mergers because the combined firms generally achieve greater diversification of their risk exposures through a better mix of geographic areas, industries, loan types, and maturity structures. In turn, improved diversification might allow the combined banking organization to undertake a portfolio shift from security investments into consumer and business loans—activities with higher expected values. Hence, profit efficiency would be greater with consolidation because capital is put to better use and because greater geographic diversification tends to reduce risk.<sup>22</sup>

Findings to date also suggest somewhat greater payment-system efficiency (see Hancock, Humphrey, and Wilcox [1999] and Adams, Bauer, and Sickles [2002]) and, for institutions that have increased their geographic diversification, possibly a lower risk of insolvency (Group of Ten [2001] and Berger and DeYoung [2001]). Finally, a potential negative effect of the reduced number of banking organizations has been avoided: access to banking services (including lending to small businesses) seems to have been relatively unaffected (see, for example,

Avery et al. [1999], DeYoung et al. [1998], and Jayaratne and Wolken [1999]).

On the other hand, most researchers—especially those focusing on the 1980s and early 1990s—have not been able to identify any of the broad-based improvements in cost efficiency that one might have expected from economies of scale or scope.<sup>23</sup> Given that managers most often cite gains from increased cost efficiency as the primary motivation for strategic consolidations, this finding (or the lack thereof) represents a fairly substantial puzzle. Some researchers have tried to explain away the lack of support for economies of scale by citing measurement and econometric difficulties and a time horizon too short for making observations. And in fact, a few more-recent studies that claim to have overcome some of these obstacles have reported results suggesting that scale-related efficiency gains in the 1990s have been substantial (Hughes, Mester, and Moon [2001] and Hughes, Mester, and Moon [1999], among others). Additional investigations into gains in efficiency will undoubtedly help solve this puzzle.

In addition to lacking consensus on cost-efficiency gains, empirical work to date has also failed to find substantive evidence of other benefits that one might hope consolidation would yield. For example, there is little evidence that either consumers or shareholders have benefited from consolidation in the industry (Shull and Hanweck [2001], Kahn, Pennachi, and Soprancetti [2001], and Prager and Hannan [1998]). Rather, there is growing evidence that increases in market power at the local level may be adversely affecting consumer prices (for both depositors and borrowers).<sup>24</sup> And as we mention above, there is also some evidence that

<sup>21</sup> Berger's (1998) concept of profit efficiency includes not only the cost-efficiency effects of mergers and acquisitions but also the revenue effects of changes in output that occur after a merger.

<sup>22</sup> For additional evidence on increased profit efficiencies, see Akhavan, Berger, and Humphrey (1997) and Boyd and Graham (1998).

<sup>23</sup> A number of studies have found little or no evidence of scale economies. These include Stiroh (2000) and Berger, Demsetz, and Strahan (1999). Additional studies with similar findings are listed in table A.3. For the findings on scope economies, see Stiroh (2004), Amel et al. (2002), DeLong (2001), and Demsetz and Strahan (1997), among others.

<sup>24</sup> See Shull and Hanweck (2001), and Berger, Demsetz, and Strahan (1999), among others.

managers may be pursuing mergers and acquisitions for reasons other than maximizing firm value: researchers who have studied the issue have consistently found support for the idea that empire building and increased managerial compensation are often primary motives behind bank mergers.<sup>25</sup> Finally, findings from several researchers suggest that industry consolidation and the emergence of large, complex banking organizations have probably increased systemic risk in the banking system and exacerbated the too-big-to-fail problem in banking.<sup>26</sup>

Thus, despite the many empirical studies of consolidation in the U.S. banking industry, much uncertainty remains not only about the importance of the various factors behind the merger trend but also about the effects of consolidation on bank shareholders and on those who use banking services. Before we can fully understand either the causes of consolidation or all its ramifications, more work needs to be done.

### Projections of Banking Industry Structure

Because banks play an important role in the U.S. financial system, changes in the industry's structure are likely to have widespread effects. Hence, for planning purposes it would be useful if structural changes could be anticipated before they occurred.

#### *Review of Previous Projections and Their Methodologies*

Of the studies that have documented and discussed the decline in the number of banks, several—including Hannan and Rhoades (1992), Nolle (1995), Berger, Kashyap, and Scalise (1995), and Robertson (2001)—have also projected the future size and structure of the banking industry. Most of these projections are based on linear extrapolations from past trends. Although these studies all use somewhat different approaches, they all predicted a sharp decline in the number of commercial banking organizations through the decade of the 1990s and beyond.<sup>27</sup>

In the earliest of these papers, Hannan and Rhoades (1992) approached the task of projecting future U.S. commercial banking structure by assuming that the national trend would follow past responses to the relaxation of interstate banking regulations at the regional level. Accordingly, the authors examined more closely the structural transition to interstate branching experienced by the Southeast and New England over the period 1980–1989.<sup>28</sup> The authors approximated linear trends for each region by calculating an average annual rate of change in the number of commercial banking organizations for the period studied (and for the subperiod 1984–1989). They then assumed that the number of commercial banking organizations in the nation starting in 1989 would change at the rate that had been observed in the two regions. This method projected the number of commercial banking organizations in the United States to be in the range of 5,000 to 6,000 by the year 2010 (depending on the region and period used). For comparative purposes, the authors also based projections on extrapolations from national trends. This resulted in a projection of just over 5,000 commercial banking organizations by 2010.

In addition to extrapolating from regional and national trends, the authors also extrapolated from the banking structure observed in the state of California, where intrastate branching had been allowed since 1908. The commercial banking structure in California, they reasoned, would represent a sort of equilibrium case since the structure there had evolved in the absence of branching restrictions over a long period of time. In this

<sup>25</sup> See, for example, Hughes, Lang, Mester, Moon, and Pagano (2003), Bliss and Rosen (2001), and Gorton and Rosen (1995).

<sup>26</sup> Support for the too-big-to-fail motive is found in Shull and Hanweck (2001), Penas and Unal (2004), and Kane (2000). Studies on systemic risk include De Nicola and Kwast (2002) and Saunders and Wilson (1999).

<sup>27</sup> To the best of our knowledge, all previous studies excluded thrift organizations and projected only the numbers of commercial banking organizations or institutions.

<sup>28</sup> Nolle (1995) reports that by 1984, most of the six New England states had established reciprocal arrangements allowing bank holding companies to own (typically through acquisition) banking subsidiaries in another New England state; by 1987, all six states were participating in these arrangements. Similarly, by 1985 most of the states in the southeastern region of the country had accepted reciprocal arrangements, and by 1988 all of them had.

extrapolation, the authors assumed that once all geographic restrictions on branching were lifted, the ratio of commercial banking organizations to bank deposits nationwide would approach the ratio already observed in California. Projections to 2010 based on this approach varied depending on the period used to formulate the trend. However, according to the authors the most realistic projection indicated that the U.S. banking industry would eventually shrink to about 3,500 commercial banking organizations.<sup>29</sup>

Given the range of predictions yielded by the different cases, Hannan and Rhoades eventually offered a “best-guess” projection for the year 2010 of 5,500 commercial banking organizations. Regardless of methodology, however, all extrapolations suggested that, even with a continuation of the decline, the long-run equilibrium banking structure in the United States would probably consist of a very large number of banking organizations.

Nolle’s 1995 paper likewise attempted to simulate the possible effects on the U.S. banking structure of liberalizing interstate branching restrictions. Using data on the state-by-state pattern of mergers, failures, and entries over the seven-year period 1987–1993, Nolle mechanically projected the number of commercial banks (individually chartered institutions) through the end of the year 2000. He considered two scenarios: an extrapolation from past trends under the assumption that legislation allowing nationwide interstate branching would not be enacted, and a judgmental adjustment of the first scenario assuming that interstate branching legislation would be passed in 1994 and fully enacted by midyear 1997 (this latter scenario proved to be historically accurate).<sup>30</sup> Results from the first scenario (the no-interstate-branching case) indicated a decrease of just under 2,100 banks (to 8,798 institutions) during the period 1994–2000—a decrease equal to about two-thirds of the amount of consolidation observed over the 1987–1993 period. The second extrapolation (the interstate-branching case) suggested that the total additional effect on consolidation of interstate branching would be an additional

decline of about 1,000 banks (resulting in an industry total of 7,787 commercial banks in the year 2000). Given these results, Nolle concluded that interstate branching would not fundamentally alter the structure of the nation’s commercial banking industry; that is, there would still be thousands of commercial banks and thousands of bank holding companies in existence at the turn of the millennium.

A conclusion similar to those reached by Rhoades and Hannan (1992) and Nolle (1995) was reached by Berger, Kashyap, and Scalise (BKS, 1995) as well, but they used a much more complex methodology. To quantify the possible effects of the removal of all state and federal restrictions on interstate branch banking, BKS constructed an econometric model to explain the distribution of domestic commercial bank assets across organization size classes on a state-by-state basis. In their model, the proportion of banking assets in each size class was assumed to be a function of state demographic variables as well as of a number of independent variables that had been designed to capture differences in the existence and the lifting of regulatory restrictions on statewide and interstate branching as well as on multibank holding company acquisitions.

Using the regressions, BKS then simulated the effects of nationwide interstate banking for 5 years, 10 years, 25 years, and the long term, under two scenarios: first, assuming zero growth of gross domestic banking assets; second, assuming asset growth at the national trend rate over the sample period (1979–1994). For each scenario the authors assumed that nationwide banking occurred

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<sup>29</sup> Extrapolations from the 1980–1989 period actually predicted a slight increase in the number of commercial banking organizations nationwide. The estimate of 3,500 organizations is based on the trend from 1984 to 1989.

<sup>30</sup> For his interstate branching scenario, Nolle assumed that no states would choose to opt out of interstate banking or branching provisions; that all multistate, multibank holding companies (MSMBHCs) in existence at midyear 1993 would still be in existence at midyear 1997, when interstate branching was assumed to be fully in effect; and that as a group these MSMBHCs would “branch up” 75 percent of their out-of-home-state subsidiary banks by year-end 2000.

immediately (in 1994); they therefore removed all variation among the explanatory variables related to the liberalization of geographic restrictions, except for variables capturing time-since-liberalization effects. These time-effect variables were adjusted for the number of years to be projected in the simulation. The changes in the predicted proportions for each size class for each state were then added to the actual proportions in 1994 to obtain the future value. The predicted shares of domestic banking assets for each size class were then aggregated across the 50 states to obtain a weighted average proportion of assets in each size class at the national level. Finally, BKS obtained an estimate of the number of commercial banking organizations in each size class by dividing the projected total dollar value of assets in each size class by the average size of organizations in that size class in 1994.

Results from the zero-growth simulations indicated that “the removal of all geographic barriers to nationwide banking was likely to result in continued substantial consolidation of the banking industry.”<sup>31</sup> Specifically, in this scenario the model predicted that the number of commercial banking organizations would fall by almost 4,000 by 1999, from a total of 7,926 to 4,106—a decline of almost 50 percent over five years. Surprisingly, little change was predicted to occur after 1999. When gross domestic assets were allowed to grow at trend rates, the predicted increase in consolidation in the first five years due to enactment of interstate branching was even greater: the number of commercial banking organizations falls to 3,440. In contrast to the zero-growth simulation—which predicted little consolidation after the first five years—the growth simulation projected the number of organizations as continuing to fall. Under this scenario the number of banking organizations falls to 1,939 in 25 years—a decline of 76 percent from 1994 levels. Notwithstanding these reductions, BKS’s simulations still predicted that the banking structure in the United States would be characterized by thousands of small banking organizations. This finding was consistent with the findings of Hannan and Rhoades (1992) and Nolle (1995).

Finally, Robertson (2001) projected the number of commercial banking organizations in each size class by first calculating a transition matrix that indicated the probability that a bank would remain in the same size class from one year to the next, move to a new size class, or leave the industry altogether. After confirming matrix stability, he then applied the transition probabilities from the 1994–2000 transition matrix to the year-end 2000 numbers to obtain estimates for the industry’s future size distribution. On the basis of this methodology, Robertson predicted that the number of commercial banking organizations would continue to decline—from 6,750 in 2000 to 4,567 in 2007, for a 32 percent reduction. Like the projections of earlier studies, Robertson’s suggested that the number of smaller banking organizations would continue to fall steadily. Indeed, Robertson’s simulation predicted that the number of banking organizations with less than \$100 million in real assets would decline by nearly 40 percent over the seven-year period he was forecasting.

### ***New Linear Extrapolations: A Comparison with the Literature***

On the basis of earlier studies, then, it seems that we can expect to see further declines in the number of banking organizations, especially in the community banking sector (where the number of organizations with less than \$100 million in assets is expected to continue to fall dramatically). Some of the aforementioned projections, however, are based on data that are more than a decade old. We show above that the decline in the number of banking organizations, while ongoing, has slowed appreciably in the last few years. This slowing should have important implications for expectations about the future structure of the banking industry. Consequently, we have formulated new projections of industry structure based on the latest observed trends.

As a starting point, we adhered to the linear approach to project the number of banking organizations in each of five size classes through the year

<sup>31</sup> Berger, Kashyap, and Scalise (1995), 113.

Table 1

Projected Number of Banking Organizations, 2003–2013						
By GDP-Deflated Asset Class						
Number of Organizations	Assets <\$100M	\$100M ≤ Assets <\$500M	\$500M ≤ Assets <\$1B	\$1B ≤ Assets <\$10B	Assets ≥ \$10B	Total
<b>Panel A. Commercial Banks and Thrifts Combined</b>						
5-Year Average Quarterly Change	-50.55	7.85	5.15	2.50	1.00	-34.05
2003	3,683	3,172	481	411	95	7,842
2008	2,672	3,329	584	461	115	7,161
2013	1,661	3,486	687	511	135	6,480
<b>Panel B. Commercial Bank Organizations Only</b>						
5-Year Average Quarterly Change	-43.40	13.50	3.90	2.70	0.60	-22.70
2003	3,219	2,568	335	290	71	6,483
2008	2,351	2,838	413	344	83	6,029
2013	1,483	3,108	491	398	95	5,575

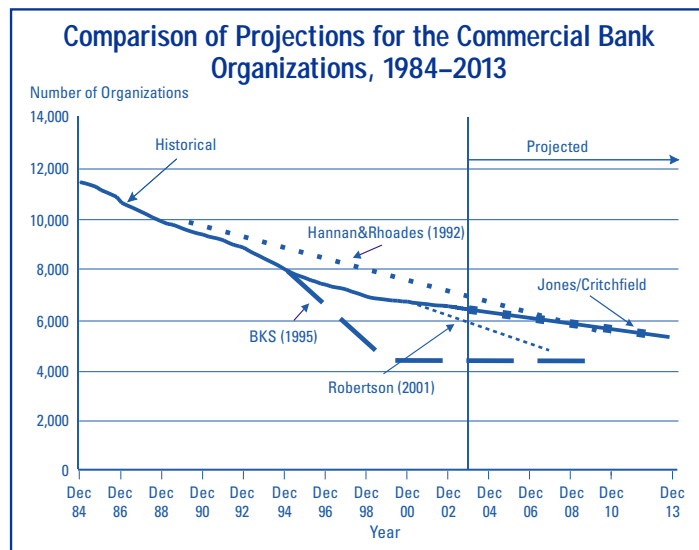
*Note:* Linear projections based on 5-Year average quarterly change (1999-2003)

2013. Our projections are based on the average quarterly net change over the five-year period 1999–2003. We chose to focus on only the last five years of data because we believe that the change occurring over this period better reflects the mix of forces affecting the banking industry at the turn of the millennium and that this period is therefore most relevant to anticipating the future direction of the industry’s structure. To make our projections comparable with those of earlier studies, we projected both the number of commercial bank organizations and the number of commercial bank and thrift organizations combined. Table 1 presents our five- and ten-year projections. As can be seen in panel A, our linear extrapolations suggest a continuing decline (of 34 organizations per quarter) in the total number of banking and thrift organizations—from 7,842 at year-end 2003 to 7,161 at year-end 2008 and to 6,480 at the end of 2013. The projected decline over five years is 681 organizations (8.7 percent); over ten years, twice that. Projections for commercial bank organizations alone (panel B) show a similar pattern. Interestingly, projections for both groups indicate that the decline will occur

exclusively within the smallest size group (organizations with less than \$100 million in assets). Our extrapolations from the trends of the past five years indicate that all other size groups will grow by small amounts.

For comparison, figure 12 contrasts our linear projections for the number of commercial bank organizations with those from earlier studies. Remarkably, Hannan and Rhoades’s (1992) “best-guess” 20-year projection for the number of commercial bank organizations in 2010 is not that much different from our own—their 5,500 compared

Figure 12



with our 5,847. The projections by BKS (1995) and Robertson (2001), however, suggest significantly more of a decline among commercial bank organizations than is indicated by our linear extrapolation from the data for the last five years.

### *Beyond Linear Extrapolations*

Although linear extrapolations like those described above provide a simple means of projecting industry structure, Shull and Hanweck (2001) have argued that projections based on simple linear extrapolations of past trends are inadequate because they fail to specify the process generating the structural change. We tend to agree. Although we used the linear approach for illustrative purposes, we believe this approach is somewhat naive because it fails to incorporate all the information contained in the data. Most importantly, it ignores the changing nature of the forces behind the decline in the number of organizations. Consequently, for reasons that will soon become clear, we view our linear projections as representing the lower bound of our estimates of the future size of the banking industry.

To improve on the simple linear extrapolations presented above, what is needed is a forecasting methodology that can capture the underlying features of the full time series on banking structure. An extremely general econometric model that promises to do this in a simple and expeditious manner is the autoregressive integrated moving average time-series model (ARIMA). First developed by Box and Jenkins (1976), this approach to modeling the processes that generate a time series of data has “withstood the test of time and experimentation as a reasonable approach for describing underlying processes that are probably, in truth, impenetrably complex.”<sup>32</sup> In simple descriptive terms, this class of models either regresses a time series on its own past values or uses a moving average process to express a time series as a linear combination of past error terms, or does both. In practice, the Box-Jenkins approach to time-series model building has been made relatively easy through the use of modern statistical software programs. After testing various models for fit, we

selected for our forecasting a first-order moving average model, fit to the second-differenced log of the time series.<sup>33</sup>

Figure 13 illustrates our forecasts of the total number of banking organizations for the years 2004–2013, based on the estimated parameters of our time-series model. As can be seen, we project the consolidation trend in the banking industry as continuing over the next ten years, albeit at a slightly slower pace over the second five-year period. In the near term (the next five years), according to our model, the industry will decline by a total of 552 organizations, from 7,842 at year-end 2003 to 7,290 by the end of 2008 (a decline of 7 percent). By 2013, our forecast shows the banking industry shrinking by an additional 424 organizations, to 6,866 (a 6 percent decline)—for a total reduction of almost a thousand organizations (or slightly more than 12 percent) over the ten-year period.

Although we believe that the forecast based on our moving average model is a substantive improvement over the forecast obtained through the simple linear extrapolation method, another interpretation of the data suggests that consolidation of the industry is slowing more appreciably than is suggested even by our time-series forecast. Indeed, according to an interpretation presented by Shull and Hanweck (2001), the decades-long consolidation trend in banking may come to an end in the not-too-distant future. Basically, Shull and Hanweck view the structural change in banking as a dynamic and nonlinear process in which a

<sup>32</sup> Greene (2000), 531.

<sup>33</sup> Given a time series, one can estimate several types of models within the class of ARIMA models. Model selection can then be based on the use of information criteria such as Akaike's information criterion (AIC) or Schwarz's Bayesian criterion (SBC), which seek to identify the “best” model—best in terms of accuracy and efficiency. We chose to use the SBC because of its greater emphasis on parsimony. Among the models tested, we settled on a first-order moving average model where the model was fit to the second-differenced log of the time series using maximum likelihood estimation (ARIMA [0,2,1]). Second-differencing was needed to achieve stationarity—an important underlying assumption of model estimation. To confirm stationarity, we examined the autocorrelation and partial correlation functions and conducted a Dickey-Fuller unit root test. See Box, Jenkins, and Reinsel (2000) or Judge et al. (1988) for a more detailed explanation of time-series model estimation and fit. Further details on model selection and testing are available from the authors of the present study.

population of banks in a stable state has been subjected to an exogenous shock (or shocks) that causes the population to shift to a new steady-state equilibrium. According to this interpretation, the reduction in the number of banking organizations is characterized as a situation in which an equilibrium banking structure (described by the stability in the number of banking organizations in the United States before 1980) was disturbed by economic, regulatory, and technological changes. The consequent decline reflected a transitional movement toward a new equilibrium structure.

Figure 13

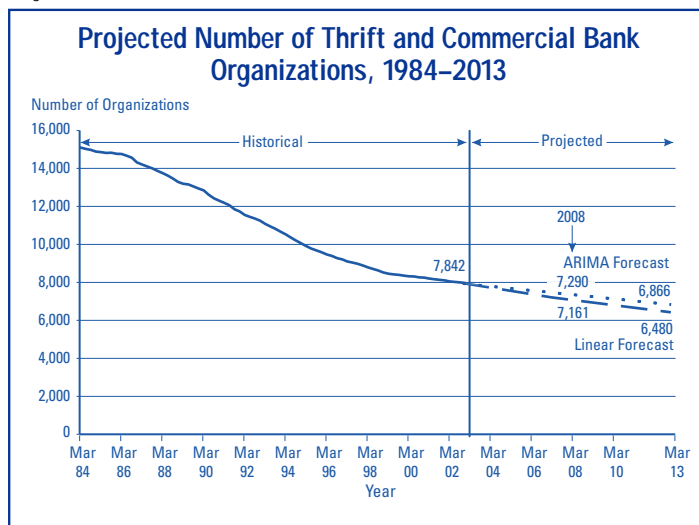


Figure 14

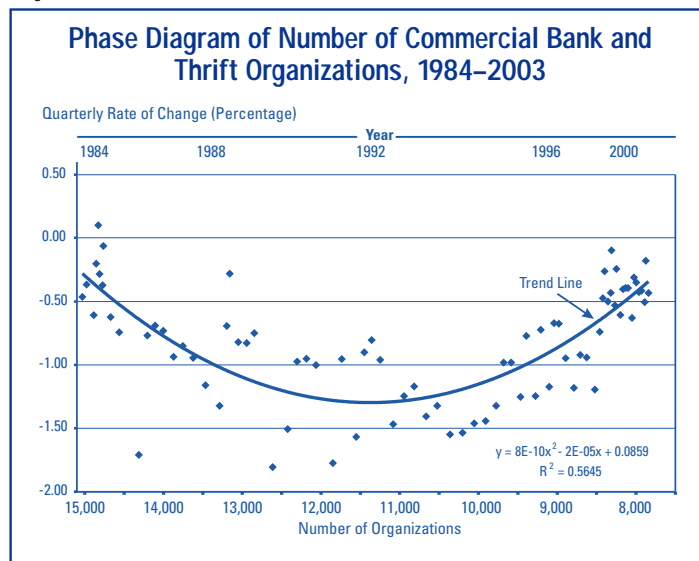


Figure 14 follows Shull and Hanweck in using a phase diagram. It plots the quarterly rate of change in the number of banking organizations against the actual number of organizations for the period 1984–2003. In the diagram we can observe a distinct transitional pattern (as indicated by the trend line) from an equilibrium structure of just over 15,000 organizations (when the rate of change was last near zero) to the current structure of just under 8,000 organizations (at year-end 2003). Indeed, the transitional nature of the plot is quite dramatic. One noteworthy feature of the diagram is that once the numbers of banking organizations began to decline, they did so first at an increasing rate and then at a decreasing rate. The turning point appears to have been at about 11,500 organizations. This is roughly the size of the industry in mid-1992. Interestingly, that year marked both the end of a national recession and the unofficial end of the S&L and banking crises. And if we layer the phase diagram with a time line, it becomes easy to see how the transition has progressed since 1984.

Extension of the trend line to a point of intersection with the zero-rate-of-change line would indicate that the structure of the banking industry will again reach an equilibrium structure in about five years, at approximately 7,250 organizations (assuming that progression along the trend proceeds unimpeded). The conclusion to be drawn from the phase diagram—that the decline in the number of banking organizations has slowed appreciably and that industry structure is likely to stabilize within the next few years at about 7,250 organizations—is at least numerically consistent with the five-year forecast generated by our moving average model.



### Conclusion

Considered together, our three forecasts (based on linear extrapolation, time-series modeling, and a phase diagram) imply that in the absence of a new shock to the industry, the U.S. banking industry is likely to retain a structure characterized by several thousand very small to medium-size community bank organizations, a less-numerous group of mid-size regional organizations, and a handful of extremely large multinational banking organizations. Consistent with projections from earlier studies, our projections indicate that the U.S. banking industry is not likely to resemble the banking industries in countries such as Germany, which have only a handful of universal banks.

Although our forecasts contrast rather sharply with conventional wisdom about the future pace of decline in the number of banking institutions, we believe these projections to be reasonable under current conditions. The major influences of the 1980s, under which the decline accelerated, are no longer relevant. Gone are the high failure rates and other contractionary influences of the thrift and banking crises. Similarly, the effects of the liberalization of interstate banking and branching laws are largely in the past, as are the effects of

most other major deregulatory initiatives. Bank holding companies, for example, have already collapsed inefficient multistate, multibank structures, and opportunities for additional gains are limited. This might be especially true for the larger banks (which have been particularly active merger participants) as they become increasingly constrained by state and federal limits on deposit market shares. Also gone are the merger-accommodating atmosphere and the “irrational exuberance” that accompanied the amazing stock market boom of the late 1990s.

In their place is a more uncertain economic environment that has spawned fewer bank mergers and consolidations. Although we believe that sustained industry profitability and competitive pressures will lead to some additional decline in the number of banking organizations going forward, we do not foresee a return to the rate of decline witnessed in the late 1980s and early 1990s. Rather, we see a balance developing between the number of bank start-ups and the number of charter losses due to mergers and acquisitions—with little net change in the number of banking organizations nationwide. In other words, it just might be that the consolidation trend in banking—that “long, strange trip”—is nearing an end.

### REFERENCES

- Adams, Robert M., Paul W. Bauer, and Robin C. Sickles. 2002. Scope and Scale Economies in Federal Reserve Payment Processing. Working Paper 02-13. Federal Reserve Bank of Cleveland.
- Akhavein, J. D., A. N. Berger, and D. B. Humphrey. 1997. The Effects of Megamergers on Efficiency and Prices: Evidence from a Bank Profit Function. *Review of Industrial Organization* 12, no. 1:95–139.
- Amel, Dean, Colleen Barnes, Fabio Panetta, and Carmelo Salleo. 2002. Consolidation and Efficiency in the Financial Sector: A Review of the International Evidence. Finance and Economics Discussion Series Working Paper 2002-47. Federal Reserve Board.
- Avery, Robert B., Raphael W. Bostic, Paul S. Calem, and Glenn B. Canner. 1999. Consolidation and Bank Branching Patterns. *Journal of Banking and Finance* 23, nos. 2–4:497–532.
- Berger, Allen N. 1998. The Efficiency Effects of Bank Mergers and Acquisitions: A Preliminary Look at the 1990s Data. In *Bank Mergers and Acquisitions*, edited by Yakov Amihud and Geoffrey Miller, 79–111. Kluwer Academic Publishers.
- . 2003. The Economic Effects of Technological Progress: Evidence from the Banking Industry. *Journal of Money, Credit, and Banking* 35, no. 2:141–76.
- Berger, Allen N., Rebecca S. Demsetz, and Philip E. Strahan. 1999. The Consolidation of the Financial Services Industry: Causes, Consequences, and Implications for the Future. *Journal of Banking and Finance* 23, nos. 2–4:123–94.
- Berger, Allen N., and Robert DeYoung. 2001. The Effects of Geographic Expansion on Bank Efficiency. Finance and Economics Discussion Series Working Paper 2001-03. Federal Reserve Board.
- . 2002. Technological Progress and the Geographic Expansion of the Banking Industry. Working Paper 2002-07. Federal Reserve Bank of Chicago.
- Berger, Allen N., and Timothy H. Hannan. 1997. Using Measures of Firm Efficiency to Distinguish among Alternative Explanations of the Structure-Conduct-Performance Relationship. *Managerial Finance* 23, no. 2:6–31.
- Berger, Allen N., David B. Humphrey, and Lawrence B. Pulley. 1996. Do Consumers Pay for One-Stop Banking? Evidence from an Alternative Revenue Function. *Journal of Banking and Finance* 20, no. 9:1601–21.
- Berger, Allen N., Anil K. Kashyap, and Joseph M. Scalise. 1995. The Transformation of the U.S. Banking Industry: What a Long, Strange Trip It's Been. *Brookings Papers on Economic Activity* 2:54–219.
- Bliss, Richard T., and Richard J. Rosen. 2001. CEO Compensation and Bank Mergers. *Journal of Financial Economics* 61, no. 1:107–38.
- Box, G. and G. Jenkins. 1976. *Time Series Analysis: Forecasting and Control*. Holden-Day.
- Box, George E. P., Gwilym M. Jenkins, and Gregory C. Reinsel. 2000. *Time Series Analysis: Forecasting and Control*. 3rd ed., Prentice Hall.

- Boyd, John H., and Stanley L. Graham. 1998. Consolidation in U.S. Banking: Implications for Efficiency and Risk. In *Bank Mergers and Acquisitions*, edited by Yakov Amihud and Geoffrey Miller, 113–35. Kluwer Academic Publishers.
- Calomiris, C. W., and J. Karceski. 1998. *Is the Bank Merger Wave of the 1990s Efficient? Lessons from Nine Case Studies*. AEI Press.
- Cole, Rebel A., Lawrence G. Goldberg, and Lawrence J. White. 2004. Cookie Cutter vs. Character: The Micro Structure of Small Business Lending by Large and Small Banks. *Journal of Financial and Quantitative Analysis* 39, no. 2:227–51.
- Cornett, Marcia Millon, Gayane Hovakimian, Darius Palia, and Hassan Tehranian. 2003. The Impact of the Manager–Shareholder Conflict on Acquiring Bank Returns. *Journal of Banking and Finance* 27, no. 1:103–31.
- Critchfield, Tim, Tyler Davis, Lee Davison, Heather Gratton, George Hanc, and Katherine Samolyk. 2004. Community Banks: Their Recent Past, Current Performance, and Future Prospects. *FDIC Banking Review* 16, nos. 3–4:1–56.
- DeLong, Gayle L. 2001. Stockholder Gains from Focusing versus Diversifying Bank Mergers. *Journal of Financial Economics* 59, no. 2:221–52.
- Demsetz, Rebecca S., and Philip E. Strahan. 1997. Diversification, Size, and Risk at Bank Holding Companies. *Journal of Money, Credit, and Banking* 29, no. 3:300–13.
- De Nicola, Gianni, and Myron L. Kwast. 2002. Systemic Risk and Financial Consolidation: Are They Related? Working Paper WP/02/55. International Monetary Fund.
- DeYoung, R., I. Hasan, and B. Kirchhoff. 1998. The Impact of Out-of-State Entry on the Cost Efficiency of Local Banks. *Journal of Economics and Business* 50, no. 2:191–203.
- Emmons, William R., and Stuart I. Greenbaum. 1998. Twin Information Revolutions and the Future of Financial Intermediation. In *Bank Mergers and Acquisitions*, edited by Yakov Amihud and Geoffrey Miller, 37–56. Kluwer Academic Publishers.
- Gorton, Gary, and Richard Rosen. 1995. Corporate Control, Portfolio Choice, and the Decline of Banking. *Journal of Finance* 50, no. 5:1377–1420.
- Greene, William H. 2000. *Econometric Analysis*. 4th ed., Prentice Hall.
- Group of Ten (G10). 2001. Consolidation in the Financial Sector. Working Group Report to the Governors of the Group of Ten. G10.
- Hadlock, Charles, Joel Houston, and Michael Ryngaert. 1999. The Role of Managerial Incentives in Bank Acquisitions. *Journal of Banking and Finance* 23, nos. 2–4:221–49.
- Hancock, D., D. B. Humphrey, and J. A. Wilcox. 1999. Cost Reductions in Electronic Payments: The Roles of Consolidation, Economies of Scale, and Technical Change. *Journal of Banking and Finance* 23, nos. 2–4:391–421.
- Hannan, Timothy H., and Stephen A. Rhoades. 1992. Future U.S. Banking Structure: 1990 to 2010. *The Antitrust Bulletin* 37, no. 3:737–98.
- Houston, Joel F., Christopher M. James, and Michael D. Ryngaert. 2000. Where Do Merger Gains Come From? Bank Mergers from the Perspective of Insiders and Outsiders. *Journal of Financial Economics* 60, nos. 2–3:285–331.

- Hughes, J. P., W. Lang, L. J. Mester, and C. G. Moon. 1996. Efficient Banking under Interstate Branching. *Journal of Money, Credit, and Banking* 28, no. 4 (Pt. 2):1045–71.
- . 1999. The Dollars and Sense of Bank Consolidation. *Journal of Banking and Finance* 23, nos. 2–4:291–324.
- Hughes, J. P., W. Lang, L. J. Mester, C. G. Moon, and M. S. Pagano. 2003. Do Bankers Sacrifice Value to Build Empires? Managerial Incentives, Industry Consolidation, and Financial Performance. *Journal of Banking and Finance* 27, no. 3:417–47.
- Hughes, J. P., and L. J. Mester. 1998. Bank Capitalization and Cost: Evidence of Scale Economies in Risk Management and Signaling. *Review of Economics and Statistics* 80, no. 2:314–25.
- Hughes, J. P., L. J. Mester, and C. G. Moon. 2001. Are Scale Economies in Banking Elusive or Illusive? Incorporating Capital Structure and Risk-Taking into Models of Bank Production. *Journal of Banking and Finance* 25, no. 12:2169–2208.
- Hunter, William C. 2001. The Internet and the Commercial Banking Industry: Strategic Implications from a U.S. Perspective. In *Financial Intermediation in the Twenty-first Century*, edited by Zuhayr Mikdashi, 17–28. Palgrave.
- Jayaratne, Jith, and John Wolken. 1999. How Important Are Small Banks to Small Business Lending? New Evidence from a Survey of Small Firms. *Journal of Banking and Finance* 23, nos. 2–4:427–58.
- Judge, George G., R. Carter Hill, William E. Griffiths, Helmut Lütkepohl, and Tsoun-Chao Lee. 1988. *Introduction to the Theory and Practice of Econometrics.*, 2nd ed., John Wiley & Sons.
- Kahn, Charles M., George G. Pennachi, and Ben J. Spranzetti. 2000. Bank Consolidation and Consumer Loan Interest Rates. In *The Changing Financial Industry Structure and Regulation: Bridging States, Countries, and Industries, Proceedings of the 36th Annual Conference on Bank Structure and Competition*, 563–93. Federal Reserve Bank of Chicago.
- Kane, Edward J. 2000. Incentives for Banking Megamergers: What Motives Might Regulators Infer from Event-Study Evidence? *Journal of Money, Credit, and Banking* 32, no. 3:671–701.
- Kroszner, Randall, and Philip E. Strahan. 2000. Obstacles to Optimal Policy: The Interplay of Politics and Economics in Shaping Bank Supervision and Regulation Reforms. Working Paper 7582. National Bureau of Economic Research.
- Kwan, S. H. 1998. Securities Activities by Commercial Banking Firms' Section 20 Subsidiaries: Risk, Return, and Diversification Benefits. Working Paper 98-10. Federal Reserve Bank of San Francisco.
- Kwan, Simon H., and James A. Wilcox. 1999. Hidden Cost Reductions in Bank Mergers: Accounting for More Productive Banks. Working Paper 99-10. Federal Reserve Bank of San Francisco.
- Lown, Cara S., Carol L. Osler, Philip E. Strahan, and Amir Sufi. 2000. The Changing Landscape of the Financial Services Industry: What Lies Ahead? Federal Reserve Bank of New York *Economic Policy Review* 6, no. 4:39–55.

- Milbourn, Todd T., W. A. Boot, and Anjan V. Thakor. 1999. Megamergers and Expanded Scope: Theories of Bank Size and Activity Diversity. *Journal of Banking and Finance* 23, nos. 2–4:195–214.
- Mishkin, Frederic S., and Philip E. Strahan. 1999. What Will Technology Do to Financial Structure? In *Brookings–Wharton Papers on Financial Services*, edited by Robert E. Litan and Anthony M. Santomero, 249–87. Brookings Institution Press.
- Montgomery, Lynne. 2003. Recent Developments Affecting Depository Institutions. *FDIC Banking Review* 15, no. 3:33–38.
- Moore, Robert R., and Thomas F. Siems. 1998. Bank Mergers: Creating Value or Destroying Competition? Federal Reserve Bank of Dallas *Financial Industry Studies* (3rd Quarter).
- Nolle, Daniel E. 1995. Banking Industry Consolidation: Past Changes and Implications for the Future. Economic and Policy Analysis Working Paper 95-1. Office of the Comptroller of the Currency.
- Peek, Joe, and Eric S. Rosengren. 1996. Small Business Credit Availability: How Important Is the Size of the Lender? In *Financial System Design: The Case for Universal Banking*, edited by A. Saunders and I. Walter, 628–55. Irwin Publishing.
- . 1998. Bank Consolidation and Small Business Lending: It's Not Just Bank Size That Matters. *Journal of Banking and Finance* 22, nos. 6–8:799–819.
- Penas, María Fabiana, and Haluk Unal. 2004. Gains in Bank Mergers: Evidence from the Bond Markets. *Journal of Financial Economics* 74, no. 1: 149–79.
- Peristiani, Stavros. 1997. Do Mergers Improve the X-Efficiency and Scale Economies of U.S. Banks? Evidence from the 1980s. *Journal of Money, Credit, and Banking* 29, no. 3:326–37.
- Pilloff, Steven. 1999. Multimarket Contact in Banking. *Review of Industrial Organization* 14, no. 2:163–82.
- Pilloff, S. J., and A. M. Santomero. 1998. The Value Effects of Bank Mergers and Acquisitions. In *Bank Mergers and Acquisitions*, edited by Yakov Amihud and Geoffrey Miller, 59–78. Kluwer Academic Publishers.
- Prager, R. A., and T. H. Hannan. 1998. Do Substantial Horizontal Mergers Generate Significant Price Effects? Evidence from the Banking Industry. *Journal of Industrial Economics* 46, no. 4:433–52.
- Rhoades, Stephen A. 2000. Bank Mergers and Banking Structure in the United States, 1980–1998. Staff Study 174. Federal Reserve Board.
- Robertson, Douglas D. 2001. A Markov View of Bank Consolidation: 1960–2000. Economic and Policy Analysis Working Paper 2001-4. Office of the Comptroller of the Currency.
- Ryan, Sean J. 1999. Finding Value in Bank Mergers. In *Global Financial Crises: Implications for Banking and Regulation, Proceedings of the 35th Annual Conference on Bank Structure and Competition*, 548-52. Federal Reserve Bank of Chicago.

- Saunders, Anthony, and Berry Wilson. 1999. The Impact of Consolidation and Safety-Net Support on Canadian, U.S., and U.K. Banks: 1893–1992. *Journal of Banking and Finance* 23, nos. 2–4:537–71.
- Shull, Bernard, and Gerald Hanweck. 2001. *Bank Mergers in a Deregulated Environment*. Quorum Books.
- Simons, Katarina, and Joanna Stavins. 1998. Has Antitrust Policy in Banking Become Obsolete? Federal Reserve Bank of New England *Economic Review* (March–April): 13–26.
- Stiroh, Kevin J. 2004. Diversification in Banking: Is Noninterest Income the Answer? *Journal of Money, Credit, and Banking* 36, no. 5:853–882.
- . 2000. How Did Bank Holding Companies Prosper in the 1990s? *Journal of Banking and Finance* 24, no. 11:1703–45.
- Strahan, Philip E., and J. P. Weston. 1996. Small Business Lending and Bank Consolidation: Is There a Cause for Concern? Federal Reserve Bank of New York *Current Issues in Economics and Finance* 2:1–6.
- . 1998. Small Business Lending and the Changing Structure of the Banking Industry. *Journal of Banking and Finance* 22, nos. 6–8:821–45.

## Consolidation in the U.S. Banking Industry

Table A1

<b>Share of Industry Assets and Deposits Held by the Nation's 25 Largest Banking Companies (Pro-forma)</b> Data as of December 31, 2003							
<b>Ranking</b>	<b>Bank Holding Company</b>	<b>Total Assets<sup>a</sup> (\$ Billions)</b>	<b>Share of Industry Assets</b>	<b>Cumulative Percentage of Assets</b>	<b>Domestic Deposits (\$ Billions)</b>	<b>Share of Industry Domestic Deposits</b>	<b>Cumulative Percentage of Deposits</b>
1	J.P. Morgan Chase & Co. / Bank One <sup>b</sup>	1,009	11.11	11.11	345	6.61	6.61
2	Bank of America / Fleetboston <sup>b</sup>	870	9.58	20.70	512	9.82	16.43
3	Citigroup Inc.	796	8.77	29.47	181	3.47	19.90
4	Wells Fargo & Company	380	4.19	33.65	241	4.62	24.52
5	Wachovia Corporation	362	3.99	37.65	213	4.09	28.61
6	Washington Mutual Inc.	276	3.04	40.68	168	3.23	31.84
7	U.S. Bancorp	192	2.12	42.80	114	2.19	34.03
8	National City Corporation	132	1.45	44.26	61	1.17	35.20
9	Suntrust Banks, Inc.	125	1.37	45.63	76	1.47	36.67
10	ABN AMRO Holding N.V.	107	1.18	46.81	46	0.88	37.55
11	HSBC Holdings PLC	98	1.08	47.88	45	0.86	38.41
12	Fifth Third Bancorp	95	1.05	48.93	51	0.97	39.38
13	BB&T Corporation	95	1.04	49.97	60	1.16	40.54
14	The Bank of New York Company, Inc.	90	0.99	50.97	34	0.65	41.19
15	Keycorp	85	0.93	51.90	48	0.92	42.11
16	State Street Corporation	80	0.89	52.79	13	0.25	42.36
17	Golden West Financial Corp.	80	0.89	53.67	45	0.87	43.23
18	The Royal Bank of Scotland Group PLC	78	0.86	54.53	58	1.12	44.34
19	The PNC Financial Services Group, Inc.	64	0.71	55.24	45	0.87	45.21
20	MBNA Corporation	59	0.64	55.89	31	0.59	45.80
21	COMERICA Incorporated	53	0.58	56.47	40	0.78	46.58
22	Southtrust Corporation	52	0.57	57.04	33	0.62	47.21
23	Allied Irish Banks, P.L.C.	50	0.55	57.59	31	0.59	47.80
24	Mitsubishi Tokyo Financial Group, Inc.	48	0.53	58.12	35	0.67	48.47
25	AMSOUTH Bancorporation	46	0.50	58.62	29	0.56	49.03
	<b>Total Top 25 Banking Companies</b>	<b>\$5,321</b>	<b>58.62</b>		<b>\$2,556</b>	<b>49.03</b>	

<sup>a</sup> Non-bank assets are excluded.  
<sup>b</sup> Pro-forma data include two pending mergers: Bank of America and Fleetboston, J.P. Morgan Chase & Co. and Bank One Corp.  
Source: FDIC Call Reports and Thrift Financial Reports

Table A2

<b>Major Legislative and Regulatory Changes Affecting Banking Consolidation</b>	
<b>Year</b>	<b>Description</b>
1980	Depository Institutions Deregulation and Monetary Control Act (DIDMCA). Raised federal deposit insurance coverage limit from \$40,000 to \$100,000. Phased out interest-rate ceilings. Allowed depositories to offer negotiable order of withdrawal (NOW) accounts nationwide. Eliminated usury ceilings. Imposed uniform reserve requirements on all depository institutions and gave them access to Federal Reserve services.
1982	Garn-St Germain Act. Permitted money market deposit accounts. Permitted banks to purchase failing banks and thrifts across state lines. Expanded thrift lending powers.
1987	Competitive Equality in Banking Act (CEBA). Allocated \$10.8 billion in additional funding to the Federal Savings and Loan Insurance Corporation (FSLIC). Authorized forbearance program for farm banks. Reaffirmed that the "full faith and credit" of the U.S. Department of the Treasury (Treasury) stood behind federal deposit insurance.
1987	Board of Governors of the Federal Reserve System (Federal Reserve) authorized limited underwriting activities for Bankers Trust, J.P. Morgan, and Citicorp with a 5 percent revenue limit on Section 20 ineligible securities activities.
1989	Financial Institutions Reform, Recovery, and Enforcement Act (FIRREA). Provided \$50 billion in taxpayer funds to resolve failed thrifts. Replaced Federal Home Loan Bank Board with the Office of Thrift Supervision to charter, regulate and supervise thrifts. Restructured federal deposit insurance for thrifts and raised premiums. Re-imposed restrictions on thrift lending activities. Directed the Treasury to study deposit insurance reform.
1989	Federal Reserve expanded Section 20 underwriting permissibility to corporate debt and equity securities, subject to revenue limit.
1989	Federal Reserve raised limit on revenue from Section 20 eligible securities activities from 5 percent to 10 percent.
1991	Federal Deposit Insurance Corporation Improvement Act (FDICIA). Directed the Federal Deposit Insurance Corporation (FDIC) to develop and implement risk-based deposit insurance pricing. Required "prompt corrective action" of poorly capitalized banks and thrifts and restricted "too big to fail." Directed the FDIC to resolve failed banks and thrifts in the least costly way to the deposit insurance funds.
1993	Court ruling in Independent Insurance Agents of America v. Ludwig allowed national banks to sell insurance from small towns.
1994	Riegle-Neal Interstate Banking and Branching Efficiency Act (Riegle-Neal). Permitted banks and bank holding companies (BHCs) to purchase banks or establish subsidiary banks in any state nationwide. Permitted national banks to open branches or convert subsidiary banks into branches across states lines.
1995	Court ruling in NationsBank v. Valic allowed banks to sell annuities.
1996	Court ruling in Barnett Bank v. Nelson overturned states' restrictions on bank insurance sales.
1996	Federal Reserve announced the elimination of many firewalls between bank and nonbank subsidiaries within BHCs.
1996	Federal Reserve raised limit on revenue from Section 20 eligible securities activities from 10 percent to 25 percent.
1997	Federal Reserve eliminated many of the remaining firewalls between bank and nonbank subsidiaries within BHCs.
1999	Gramm-Leach-Bliley Financial Modernization Act (GLB). Authorized financial holding companies (FHCs) to engage in a full range of financial services such as commercial banking, insurance, securities, and merchant banking. Gave the Federal Reserve, in consultation with the Treasury, discretion to authorize new financial activities for FHCs. Gave the Federal Reserve discretion to authorize complementary activities for FHCs. Established the Federal Reserve as the "umbrella" regulator of FHCs. Provided low-cost credit to community banks. Reformed the Community Reinvestment Act. Eliminated the ability of commercial firms to acquire or charter a single thrift in a unitary thrift holding company.
2001	Federal Reserve issued revisions to Regulation K. Expanded permissible activities abroad for U.S. banking organizations. Reduced regulatory burden for U.S. banks operating abroad and streamlined the application and notice process for foreign banks operating in the United States. Allowed banks to invest up to 20 percent of capital and surplus in Edge Corporations. Liberalized provisions regarding the qualification of foreign organizations for exemptions from the nonbanking prohibitions of Section 4 of the Bank Holding Company Act. Implemented provisions of Riegle-Neal that affect foreign banks.

*Sources:* Lown, Osler, Strahan, and Sufi (2000); Kroszner and Strahan (2000); and Montgomery (2003).



## Consolidation in the U.S. Banking Industry

Table A3

Summary of Recent Empirical Studies on the Causes of Consolidation in the Banking Industry		
Empirical Finding	Study Reference	Summary
Some evidence of increase in market power (share) with some evidence of price effects in concentrated market	Shull and Hanweck (2001); Berger, Demsetz, and Strahan (1999)	Surveyed the literature and found evidence of market power effects (with higher loan rates and lower deposit rates in concentrated markets) in the 1980s. Data for the 1990s, however, suggested a weaker relationship between local market concentration and deposit rates.
	Pilloff (1999)	Found that banks in more concentrated markets earned higher profits and that the number of multimarket contacts was positively related to profitability-suggesting that multimarket contact may reduce competition.
	Prager and Hannan (1998)	Found that a reduction in interest rates on local deposit accounts was associated with horizontal mergers that raised market concentration significantly.
	Simons and Stavins (1998)	Using data for the period 1986-1994, found that after a bank's participation in a merger, a 1.0 percent higher HHI was associated with a 1.2 percent reduction in interest rates on MMDA, a 0.3 percent lower rate on CDs, and lower rates on deposit accounts across the board.
	Moore and Siems (1998)	Found that the relationship between concentration and profitability was much weaker in 1997 than it had been a decade earlier.
	Berger and Hannan (1997)	Found that banks in more concentrated markets charged higher rates on small business loans and paid lower rates on retail deposits.
Some evidence of greater profit efficiencies	Berger (1998); Akhavan, Berger, and Humphrey (1997)	Found that mergers led to an improvement in profit efficiency. The improvement seemed to result from an increase in lending activity (as opposed to security investments) and a more efficient use of capital.
	Boyd and Graham (1998)	Found that being merged "helped" small banks-increasing ROA and decreasing expense measures.
Some evidence of improvements from geographic diversity	Group of Ten (2001)	Reviewed the latest research, which suggested that because of geographic diversification, consolidation of banks within the United States was likely to lead to reductions in risk. However, the studies also noted that these positive benefits might be offset by shifts to higher-risk portfolios or by operational risks.

Table A3 continued

<b>Summary of Recent Empirical Studies on the Causes of Consolidation in the Banking Industry</b>		
<b>Empirical Finding</b>	<b>Study Reference</b>	<b>Summary</b>
Some evidence of improvements from geographic diversity	Berger and DeYoung (2001)	Found that the negative effects of distance tended to be modest in size. This finding suggests that efficient organizations can successfully export their superior skills, policies, and practices to their out-of-state affiliates.
	Hughes, Lang, Mester, and Moon (1996, 1999)	Found that when organizations diversified geographically, especially via interstate banking, efficiency tended to be higher and insolvency risk tended to be lower.
Some evidence of improvements in payment system efficiency	Hancock, Humphrey, and Wilcox (1999)	Found substantial scale economies in Fedwire operations and an improvement in cost efficiency of Fedwire from consolidation of processing sites. Suggested results were likely to carry over to consolidation of private sector processors.
	Adams, Bauer, and Sickles (2002)	Found indications of significant and positive scale economies in the provision of electronic payment processing services by the Federal Reserve (Fedwire, ACH, and Book-Entry securities). Results also showed that during the 1990s, technological change lowered marginal costs significantly.
Some evidence that management may act in self-interest	Hughes, Lang, Mester, Moon, and Pagano (2003)	Found evidence that managerial entrenchment at U.S. bank holding companies was associated with asset sales that yielded smaller improvements and with acquisitions that resulted in worse performance. Suggested that these results were consistent with empire-building strategies that sacrificed value.
	Bliss and Rosen (2001); Gorton and Rosen (1995)	Argued that two primary motives for bank mergers were empire building and increased managerial compensation, especially on the part of managers who were entrenched or insulated from the market.
	Hadlock, Houston, and Ryngaert (1999)	Found that banks with higher levels of management ownership were less likely to be acquired; argued that this evidence was consistent with an entrenchment hypothesis, which holds that management teams with significant ownership positions block attempts to be acquired at reasonable prices.

## Consolidation in the U.S. Banking Industry

Table A3 continued

<b>Summary of Recent Empirical Studies on the Causes of Consolidation in the Banking Industry</b>		
<b>Empirical Finding</b>	<b>Study Reference</b>	<b>Summary</b>
Some support for the too-big-to-fail motive	Shull and Hanweck (2001)	Found that the top 10 largest banks paid less for funds than smaller banks and operated with lower capitalization rates.
	Penas and Unal (2004)	Showed that positive bond returns and a decline in credit spreads were related to the incremental size attained in bank mergers by medium-sized banks—those most likely to become large enough to be considered TBTF.
	Kane (2000)	Showed that in banking megamergers of 1991-98, stockholders of large-bank acquirers gained value when a target institution was large. Argued that the effect of size underscored the possibility that too-big-to-discipline subsidies had distorted deal-making incentives for megabanks.
Some potential for increased systemic risk and safety net expansion	De Nicola and Kwast (2002)	Showed that, among large complex banking organizations during the 1990s, there was a significant upward trend in the degree of interdependency.
	Group of Ten (2001)	Concluded that there were reasons to believe that financial consolidation in the United States had increased the risk that the failure of a large complex banking organization would be disorderly.
	Saunders and Wilson (1999)	Found a dramatic reduction in bank capital ratios associated with increased safety-net support; also found that the structure and strength of safety-net guarantees might affect risk taking.

Table A3 continued

<b>Summary of Recent Empirical Studies on the Causes of Consolidation in the Banking Industry</b>		
<b>Empirical Finding</b>	<b>Study Reference</b>	<b>Summary</b>
<p>BUT Mixed evidence on cost efficiencies from scale economies</p>	Stiroh (2000)	Examined the improved performance of U.S. BHCs from 1991 to 1997 and found that the gains were due primarily to productivity growth and changes in scale economies. Estimated cost functions showed modest economies of scale present throughout the period, with the largest BHCs showing stronger economies of scale.
	Hughes, Mester, and Moon (2001); Hughes, Lang, Mester, and Moon (1999); Hughes and Mester (1998)	Claimed to have found evidence of large-scale economies once risk diversification, capital structure, and endogenous risk taking were explicitly considered in the analyses of production.
	Berger, Demsetz, and Strahan (1999)	Extensively reviewed the literature on cost efficiency and found on the basis of data from the 1980s and early 1990s little efficiency improvement from mergers and acquisitions. However, cost efficiency effects might depend on the type of merger, the motivations of the managers, and the implementation of the merger.
	Kwan and Wilcox (1999)	Found significant (but still relatively small) expense savings in mergers that occurred in the mid-1990s, after the pure accounting effects on reported expense data were removed.
	Boyd and Graham (1998)	Examined the effects of mergers and found evidence of cost efficiency gains for only the smallest banks. The gains disappeared quickly with increases in size and were negative for larger banks.
	Peristiani (1997)	Found that acquiring banks in the 1980s achieved moderate improvements in scale efficiency—attributable in part to the fact that the smaller target banks were on average less scale-efficient than their acquirers.
<p>Mixed evidence on cost efficiencies from scope economies</p>	Stiroh (2004)	Examined the link between the banking industry's growing reliance on noninterest income and the volatility of bank revenue and profits. Found almost no evidence that this shift offers large diversification benefits in the form of more stable profits or revenue.
	Amel et al. (2002)	In reviewing the literature, found little evidence that mergers yielded significant economies of scope.

## Consolidation in the U.S. Banking Industry

Table A3 continued

Summary of Recent Empirical Studies on the Causes of Consolidation in the Banking Industry		
Empirical Finding	Study Reference	Summary
Mixed evidence on cost efficiencies from scope economies ( <i>cont.</i> )	DeLong (2001)	Found that mergers that focused banks geographically and among product types created value, whereas those that diversified generally failed to benefit shareholders.
	Demsetz and Strahan (1997)	Showed that large bank-holding companies had better diversification across loan portfolios; it allowed them to operate with greater leverage and engage in more risky (and potentially more profitable) lending without increasing firm-specific risk.
	Kwan (1998)	Found that securities subsidiaries provided BHCs in the United States with potential benefits of diversification because revenues from the subsidiaries were not highly correlated with revenues from the rest of the BHC.
	Berger, Humphrey, and Pulley (1996)	Found no evidence of statistically significant revenue economies (and only small cost economies) of scope among either small or large banks over the period 1978-1990, even for the most efficient banks.
Little evidence of any significant, permanent increase in shareholder value	Calomiris and Karceski (1998); Pilloff and Santomero (1998)	Reviewed the literature and concluded that although some event studies found that acquirers increased their market value, most studies found that the market value of the acquiring bank declined whereas that of the target bank increased.
	Houston, James, and Ryngaert (2001)	Found (like previous studies) that the market value of the acquiring bank declined, on average, whereas that of the target bank increased. However, compared with the 1980s, the 1990s were a period of higher average abnormal returns for both bidders and targets. Results also suggested that the realization of anticipated cost savings was the primary source of gains in the majority of recent bank mergers.
	Cornett et al. (2003)	Found that diversifying bank acquisitions earn significantly negative announcement-period abnormal returns for bidder banks, whereas focusing acquisitions earn zero abnormal returns.

Table A3 continued

<b>Summary of Recent Empirical Studies on the Causes of Consolidation in the Banking Industry</b>		
<b>Empirical Finding</b>	<b>Study Reference</b>	<b>Summary</b>
Little evidence of lower consumer prices	Shull and Hanweck (2001)	After reviewing prices for retail banking services over the last decade, found no evidence that retail prices had declined. In fact, the evidence suggested the opposite—that consumer prices had increased.
	Kahn, Pennachi, Sopranzetti (2000)	Found that mergers appeared to increase rates on unsecured personal loans charged by all banks in the market in which the merger had taken place. This was consistent with an increase in market power in the market for personal loans. However, the opposite effect was observed for rates on automobile loans.
	Prager and Hannan (1998)	Found a reduction in deposit rates attributable to substantial horizontal mergers (mergers between banks competing in the same geographic markets).
Little effect on the availability of services to consumers	Avery et al. (1999)	Found that mergers of banks with branches in the same zip code reduced the number of branches per capita, whereas other mergers had little effect on branch office availability.
	DeYoung et al. (1998)	Found that small business lending declined as banks aged and increased in size. But an increase in market concentration was found to have a positive effect on small business lending in urban markets and only a modest negative effect in rural markets.
	Jayarathne and Wolken (1999)	Found (using survey data on small business borrowers) that the probability that a small firm would have a line of credit from a bank did not decrease in the long run when there were fewer small banks in the area.
	Peek and Rosengren (1996, 1998); Strahan and Weston (1996, 1998); Berger, Kashyap, and Scalise (1995)	Found that large banking organizations generally devoted smaller proportions of their assets to small business loans and that mergers between large and small banks resulted in a decrease in small business lending. Mergers between smaller banks, however, did not appear to reduce small business lending.
	Cole, Goldberg, and White (2004)	Found that large banks tended to base their small business loan decisions more on financial ratios than on prior lender-borrower relationships. In contrast, small banks relied to a greater extent on the character of the borrower.